

FINAL

Remedial Action Report

CW-7 PCB Site

**U. S. Army Garrison Fort Monmouth
Fort Monmouth, New Jersey**



Directorate of Public Works



August 3, 2004

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United States Army
Fort Monmouth, New Jersey

CW-7 PCB Site
Remedial Action Report

Fort Monmouth, New Jersey

August 3, 2004

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EXECUTIVE SUMMARY

This Remedial Action Report (RAR) presents a compilation, prepared by VERSAR, Inc. (VERSAR), of the results of the remedial action conducted by the United States (U.S.) Army Garrison Fort Monmouth, New Jersey (Fort Monmouth) – Directorate of Public Works (DPW) at Site CW-7. Site CW-7 is the location of former polychlorinated biphenyl (PCB) Transformer CW035 that was associated with Building 2000, the Officer's Club in the Charles Wood Area of Fort Monmouth. The objective of the remedial action was to remove all PCB impacted soils to the established regulatory limit and perform confirmatory sampling. VERSAR has developed this RAR based on the activities performed and the results of the remedial action.

The former locations of PCB transformers at Fort Monmouth were inspected for evidence of spills during performance of the 1993 site investigation (SI) conducted by Roy F. Weston, Inc. (WESTON). Transformer CW035 had been formerly located on a concrete pad, near the northeast entrance of the Officers' Club building (Building 2000) and the concrete pad location, designated as Site CW-7, was one of the areas sampled. At the time of sampling for the SI, the concrete pad had been removed; therefore four soil samples were collected downgradient of the former concrete pad and transformer location. PCBs were detected above the State of New Jersey Department of Environmental Protection (NJDEP) Residential Direct Contact Soil Cleanup Criteria (RDCSCC) or 0.49 mg/Kg for PCBs in soil of 0.49 mg/Kg in each of the four samples. As a result of the findings of the SI, a Decision Document was prepared by the DPW and submitted to the NJDEP describing the selected remedial alternative for Site CW-7. The selected remedial alternative encompassed excavation and offsite disposal of an estimated 410 cubic yards of contaminated soil. Excavation was determined to be the most cost effective approach for eliminating the identified contaminant of concern (i.e., PCBs) at the site and to achieve the respective NJDEP RDCSCC for PCBs in soil (0.49 mg/Kg). The NJDEP reviewed and approved the Decision Document on 1 July 1997.

In May 1996, a remedial investigation (RI) was conducted by TECOM – Vinnell Services (TVS) to delineate the horizontal and vertical extent of PCBs in soil at Site CW-7 in support of the planned remedial action. The RI used a combination of field screening techniques and laboratory analyses. A total of 67 soil samples were collected and screened in the field for PCBs. Sample locations revealing PCB concentrations above 0.49 mg/Kg were further delineated. The results of field screening showed that PCB soil contamination was primarily distributed in the area surrounding the former transformer pad location near Building 2000 and along a drainage swale that skirts the north side of Building 2000. Eight of the 67 samples (>10%) were submitted for laboratory analysis to confirm the PCB concentrations detected by field screening. The field screening and laboratory analytical results indicated a surface area encompassing approximately 3,000 square ft (ft²) within which PCB concentrations exceeded 0.49 mg/Kg. Within this area of impacted soil, PCB contamination ranged to a maximum depth of approximately 6 ft below ground surface. Based on the estimated surface area and varying depths of PCB concentrations detected above the RDCSCC, the site was divided into five areas (Areas 1 to 5) for soil excavation and removal.

Soil excavation and post-excavation sampling activities were then conducted between November 19 and 25, 1997. In evaluating the analytical results from the post-excavation sampling, it was determined that further delineation/excavation of PCB contaminated soils was required at Areas 1 and 2. However, the post-excavation sample results at Areas 3 and 4 were deemed appropriate for further evaluation using compliance averaging. Therefore, further delineation/excavation was not proposed at Areas 3 and 4. No further excavation/evaluation was required at Area 5. Further delineation and excavation efforts at Areas 1 and 2 were conducted through February 1998 where initial post-excavation sampling did not achieve the NJDEP RDCSCC for PCBs in soils. Post-excavation samples were again collected and analytical results indicated all samples to be below the NJDEP RDCSCC for PCBs in soil. The results of compliance averaging performed at Areas 3 and 4 concluded that the exceedences were considered marginal or represented de minimus quantities given the sample depth and the excavation efforts conducted and no further action was recommended.

During the course of the excavation activities, a 2,000-gallon No.2 fuel oil underground storage tank (UST) was encountered. The UST was cleaned out, removed and transported off-site for recycling to the Mazza & Sons, Inc., facility located in Tinton Falls, New Jersey. Six post-excavation soil samples were collected and submitted for Total Petroleum Hydrocarbons (TPHC) analysis. The sample results were either below the method detection limit (MDL) or below the NJDEP criteria for Total Organic Contaminants and the NJDEP Cleanup Criteria for Total Organic Contaminants.

A total of approximately 44 cubic yards of soil containing PCBs greater than 50 mg/Kg and 250 cubic yards of non-hazardous soil were excavated during the remedial action. All waste characterization analysis and disposal was handled by the DPW. The PCB soil (greater than 50 mg/Kg PCBs) was managed as a Toxic Substances Control Act (TSCA) waste and transported to for disposal at the Chemical Waste Management Facility located in Model City, New York. The remaining non-hazardous soil was transported to a thermal treatment facility in New Castle, Delaware.

The analytical results of the post-excavation soil sampling confirmed either that PCB contaminated soils had been excavated to the established remediation standard of 0.49 mg/Kg or that further evaluation and the results of compliance averaging concluded that the exceedences were considered marginal or represented de minimus quantities and no that further action is recommended. In addition, confirmatory sampling at the former UST location was below the NJDEP criteria for Total Organic Contaminants and the NJDEP Cleanup Criteria Total Organic Contaminants.

No further action is recommended in regard to Site CW-7.

1.0 INTRODUCTION

Versar, Inc. (Versar) has been contracted by the United States (U.S.) Army Garrison, Fort Monmouth (Fort Monmouth), Directorate of Public Works (DPW), Fort Monmouth, New Jersey to prepare a Remedial Action Report (RAR) for the remedial activities conducted at the CW-7 polychlorinated biphenyl site located in Fort Monmouth. This report addresses the remedial activities performed at this site as of January 2001.

1.1 Objectives

The objective of this RAR is to present the site remedial action process performed at the CW-7 site. The purpose of the remedial action was to excavate and dispose of the shallow soils impacted by metals in the vicinity of the water tank area. A Decision Document was prepared and submitted by the Fort Monmouth DPW in April 1996, which contains a description of the site and a summary of the risks and remedial alternatives. This document is provided in **Appendix A**. The remedial actions were conducted in accordance with New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for Site Remediation, N.J.A.C. 7:26E, et al.

The remedial action encompassed the following:

- Excavating “hot spot” areas identified through sampling conducted from May 1996 through November 1997.
- Closure of an underground Storage Tank
- Characterizing soils for off-site disposal.
- Comparing the results of the sampling program with the NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC).
- Disposal of contaminated soil (conducted by the DPW).

1.2 Report Organization

This report is organized to minimize repetition. **Section 2.0** provides background information and a general description of the CW-7 site located at Fort Monmouth, Charles Wood Area. **Section 3.0** describes and summarizes the characterization and delineation of contaminants, sampling procedures, and remedial activities conducted at the site. **Section 4.0** provides a summary of the remedial action effectiveness, soil disposal and cost summary.

2.0 SITE BACKGROUND AND ENVIRONMENTAL SETTING

The following sections describe the site background and environmental setting of the area surrounding Fort Monmouth and the CW-7 site. Included is a description of the site location, background, current conditions, and environmental setting.

2.1 Site Location and Description

Fort Monmouth is located in the central-eastern portion of New Jersey in Monmouth County, approximately 45 miles south of New York City and 70 miles northeast of Philadelphia (**Figure 1**). In addition to the Main Post, the installation includes two subposts, the Charles Wood Area and the Evans Area. The Main Post encompasses approximately 630 acres and is generally bounded by State Highway 35, Parkers Creek, Lafetra Brook, the New Jersey Transit Railroad, and a residential area to the south. The post was established in 1918 during World War I (WW I) as an Army Signal Corps training center. The Main Post currently provides administrative, training, and housing support functions, as well as providing many of the community facilities for Fort Monmouth. The primary mission of Fort Monmouth is to provide command, administrative, and logistical support for Headquarters, U.S. Army Communications and Electronics Command (CECOM). CECOM is a major subordinate command of the U.S. Army Materiel Command (AMC) and is the host tenant at Fort Monmouth.

The Charles Wood Area is composed of approximately 511 acres and is located 1 mile west of the Main Post. The Charles Wood Area is bounded by Tinton Avenue to the north, residential development and Pine Brook Road to the south, and the Garden State Parkway to the west. The Charles Wood Area is used primarily for research and development (R&D), and testing, and provides the greatest number of housing units available on-post.

Site CW-7, associated with Building 2000, is located in the Charles Wood area of Fort Monmouth. Building 2000 consists of a two-story building used for the Officers' Club. The Officers' Club is located on the same grounds as the Charles Wood golf course. A former transformer unit, CW035, was associated with Building 2000 until 1990. In 1989, during a post-wide site investigation, transformer CW035 was sampled and tested for PCB content. The sample results revealed a PCB level of 223,091 parts per million (ppm). The PCB Transformer (i.e., CW035) was removed from service on 10 September 1990 and shipped for offsite disposal on 24 September 1990. The former transformer location was then evaluated as part of the Site Investigation (SI) of Fort Monmouth. A site map is provided in **Figure 2**.

2.2 Site Background

Suspected hazardous waste sites at Fort Monmouth were initially identified in a report prepared by the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) entitled: *"Installation Assessment of Fort Monmouth. Report 171"*, dated May 1980. This report identified 37 sites with known or suspected waste materials on the Main Post and

the two subposts (Charles Wood and Evans Areas). Roy F. Weston, Inc. (WESTON) then conducted a background investigation on these sites and on eight additional sites, identified by Fort Monmouth and the NJDEP. As part of the 1993 background investigation (WESTON, 1993), all former locations of PCB transformers at the site were inspected for evidence of spills. All PCB transformers (i.e., containing greater than 500 ppm PCBs) had been removed, but the former locations of the transformers had not been investigated for spilled PCBs. On December 1 and 2, 1994, three transformer areas at Charles Wood were sampled. The transformer area sampling consisted of collecting concrete chips and soil samples from areas potentially impacted by leaking transformers. Soil samples were collected under the former location of pole-mounted transformers and on each side of former pad-mounted transformers. Concrete chip samples were taken at stained areas on the concrete pads or vault floors. The former location of Transformer CW035, near the northeast entrance of the Officers' Club building (Building 2000) was one of the areas sampled. Dark stains had been observed on an old concrete pad, approximately 4 feet (ft) by 6 ft in size. At the time of sampling, the concrete pad had been removed and four (4) soil samples were collected downgradient of the former pad location and the area was designated as Site CW-7. PCBs were detected above the NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC) of 0.49 milligrams/kilogram (mg/Kg) in each of the four samples collected downgradient of the former concrete pad and transformer location. The results of these investigation activities were presented in the WESTON Report entitled: *"Final, Site Investigation, Fort Monmouth, New Jersey, Main Post and Charles Wood Areas, Site Investigation Report"*, December 1995. The Section from the SI report which discusses the site investigation activities at CW-7 Site is provided in **Appendix B**.

The recommendations of the WESTON SI Report for Site CW-7 were that additional samples be taken to further delineate the extent of contamination; the contaminated soil be removed and disposed of in accordance with applicable regulations; and confirmatory sampling be performed.

2.3 Environmental Setting

The following is a description of the geological/hydrogeological setting of the area surrounding the CW-7 site. Included is a description of the regional geology of the area surrounding Fort Monmouth, as well as descriptions of the local geology and hydrogeology of the Main Post area.

2.3.1 Regional and Local Geology

Monmouth County lies within the New Jersey Section of the Atlantic Coastal Plain physiographic province. The CW-7 site is located in what may be referred to as the Outer Coastal Plain subprovince, or the Outer Lowlands. The geologic map of New Jersey is provided as **Figure 3**.

In general, New Jersey Coastal Plain formations consist of a seaward-dipping wedge of unconsolidated deposits of clay, silt, sand and gravel. These formations typically strike

northeast-southwest with a dip ranging from 10 to 60 ft (ft) per mile and were deposited on Precambrian and lower Paleozoic rocks (Zapeczka, 1989). These sediments, predominantly derived from deltaic, shallow marine, and continental shelf environments, date from Cretaceous through the Quaternary Periods. The mineralogy ranges from quartz to glauconite.

The formations record several major transgressive/regressive cycles and contain units, which are generally thicker to the southeast and reflect a deeper water environment. More than 20 regional geologic units are present within the sediments of the Coastal Plain. Regressive, upward coarsening deposits are usually aquifers (e.g., Englishtown and Kirkwood Formations, and the Cohansey Sand), while the transgressive deposits act as confining units (e.g., the Merchantville, Marshalltown, and Navesink Formations). The individual thickness for these units varies greatly (i.e., from several ft to several hundred ft). The Coastal Plain deposits thicken to the southeast from the Fall Line (i.e., a boundary zone between older, resistant rocks and younger, softer plain sediments) to greater than 6,500 ft in Cape May County (Brown and Zapeczka, 1990).

Based on the regional geologic map (Jablonski, 1968), the Cretaceous age Red Bank and Tinton Sands outcrop at the Main Post area. The Red Bank Sand conformably overlies the Navesink Formation and dips to the southeast at 35 ft per mile. The upper member (Shrewsbury) of the Red Bank Sand is a yellowish-gray to reddish brown clayey, medium-to-coarse-grained sand that contains abundant rock fragments, minor mica and glauconite (Jablonski). The lower member (Sandy Hook) is a dark gray to black, medium-to-fine grained sand with abundant clay, mica, and glauconite.

The Tinton Sand conformably overlies the Red Bank Sand and ranges from a clayey medium to very coarse-grained feldspathic-quartz and glauconite-sand to a glauconitic-coarse sand. The color varies from dark yellowish orange or light brown to moderate brown and from light olive to grayish olive. Glauconite may constitute 60 to 80 percent of the sand fraction in the upper part of the unit (Minard, 1969). The upper part of the Tinton is often highly oxidized and iron oxide encrusted (Minard, 1969). Groundwater occurs beneath the site at a depth of approximately 1 to 2 feet bgs.

The Kirkwood Formation (part of the Kirkwood-Cohansey system) crops out southeast of the Main Post and dips to the southeast at a slope of 20 ft per mile (Jablonski, 1968). The Kirkwood Formation consists of alternating layers of sand and clay. The upper unit is a light gray to yellowish-brown, fine-grained quartz sand with quartz nodules and small pebbles. The lower unit is a brown silt in Monmouth County (Jablonski, 1968).

2.3.2 Hydrogeology

Fort Monmouth lies in the Atlantic and Eastern Gulf Coastal Plain groundwater region (Meisler et al., 1988). This groundwater region is underlain by undeformed, unconsolidated to semi-consolidated sedimentary deposits. The chemistry of the water near the surface is variable with low dissolved solids and high iron concentrations. The water chemistry in areas underlain by glauconitic sediments (such as Red Bank and

Tinton Sands) is dominated by calcium, magnesium, and iron. The sediments in the area of Fort Monmouth were deposited in fluvia-deltaic to nearshore environments.

The water table aquifer in the Main Post area is identified as part of the “composite confining units,” or minor aquifers. The minor aquifers include the Navesink formation, Red Bank Sand, Tinton Sand, Hornerstown Sand, Vincentown Formation, Manasquan Formation, Shark River Formation, Piney Point Formation, and the basal clay of the Kirkwood Formation.

Well records indicate that wells installed in the Red Bank and Tinton Sands produce 2 to 25 gallons per minute (gpm). Water in these upper hydrogeologic units is typically encountered at shallow depths below ground surface (2 to 9 ft bgs). However, domestic wells are generally screened deeper in these upper hydrogeologic units. The shallow water table conditions in the Tinton and Red Bank Sands, and the similar composition of these sands within the Kirkwood Formation, suggest that the Tinton-Red Bank-Kirkwood sequence forms a single, laterally continuous aquifer. Water in this water table aquifer will flow east toward the Atlantic Ocean. Local topography will tend to deflect the flow toward local depressions.

As stated in the SI Report (Weston, 1995), N.J.A.C. 7:9-6, *Groundwater Quality Standards*, establishes groundwater criteria for different classes of groundwater. Class II-A, which is defined as all groundwater that is not classified as one of the other special classes, is the class for groundwater at Fort Monmouth. The primary designated use for Class II-A ground water is potable water; secondary uses include agricultural and industrial water.

Shallow groundwater is locally influenced within the Main Post area by the following factors:

- Tidal influence (based on proximity to the Atlantic Ocean, rivers, and tributaries)
- Topography
- Nature of the fill material within the Main Post area
- Presence of clay and silt lenses in the natural overburden deposits
- Local groundwater recharge areas (i.e., streams, lakes)

Due to the fluvial nature of the overburden deposits (i.e., sand and clay lenses), shallow groundwater flow direction is best determined on a case-by-case basis. The groundwater flow in the vicinity of the CW-7 site has been determined to be south towards Wampum Brook.

2.3.3 Soils

According to the U.S. Department of Agriculture (USDA), Soil Conservation Service, Monmouth County Soil Survey, (**Figure 4**) the following nine soil types are found in the Charles Wood area.

At	Atsion Sand
EvB	Evesboro Sand, 2 to 5% slopes
FrB	Freehold Sandy Loam, 2 to 5% slopes
FUB	Freehold Sandy Loam – urban land complex, 0 to 10% slopes
HnA	Holmdel Sandy Loam, 0 to 2% slopes
HUA	Holmdel Sandy Loam – urban land complex, 0 to 5% slopes
PT	Pits, Sands and Gravel
Sn	Shrewsbury Sandy Loam
UD	Udorthents – urban land complex, 0 to 3% slopes

A brief description of each of the identified soils types is provided below.

The Atsion sand is a nearly level, poorly drained, soil found in depressional areas and on broad flats. The uppermost two inches are matted, partly decomposed organic material and roots with six inches of black sand below. The subsurface layer is a 14-inch thick grayish brown sand. The subsoil is a dark reddish brown loamy sand, 18-inches thick, with approximately 10 inches of mottled brown sand in the lower layer. The substratum is mottled yellowish-brown fine sand to a depth of at least 60 inches. Permeability is moderately rapid or rapid in the subsoil and in the substratum. The available water capacity is low. Between November and June the seasonal high water table ranges from the surface to 1 foot (Jablonski and Baumley, 1989).

Evesboro soils are excessively drained soils that developed in acid, sandy, coastal plain sediments located on the uplands. These soils have a 4-inch surface layer where the upper 2 inches are matted decomposed organic matter with 2 inches of grayish-brown sand in the lower layer. The subsurface layer is 5 inches of yellowish-brown sand. The subsoil and substratum are yellowish-brown sand. Permeability is rapid in the subsoil and substratum. The available water capacity is low. The seasonal high water table is at a depth of more than 6 ft. Runoff is slow. At Charles Wood, the Evesboro soils are represented by the Evesboro sand, with 2 to 5% slopes (EvB) (Jablonski and Baumley, 1989).

Freehold soils are well-drained soils that formed in acid loamy coastal plain sediments that by volume are 1 to 10% glauconite and are found on uplands. The surface layer is 9-inches thick, dark yellowish brown sandy loam. The subsoil is 26 inches thick. The upper 16 inches of the subsoil are dark brown sandy loam and sandy clay loam with some glauconite. The lower 10 inches are brown sandy loam with glauconite. The substratum is yellowish brown loamy sand with much glauconite to a depth of 70 inches. Permeability is moderate in the subsoil and moderate to moderately rapid in the substratum. Surface runoff is medium. The available water capacity is high. Freehold soils are classified as nonhydric (Jablonski and Baumley, 1989).

Holmdel soils are level, moderately well drained to somewhat poorly drained soils found in depressions and on low divides. The surface layer is a 12-inch thick dark grayish brown sandy loam. The subsoil has two layers: the upper is a yellowish brown sandy loam, 12-inches thick, and the lower layer is mottled yellowish brown sandy clay loam to

a depth of 38 inches. The substratum is mottled, yellowish brown and light olive brown sand and sandy loam to a depth of at least 60 inches. Permeability is moderate in the subsoil and substratum, and the available water capacity is high. The seasonal high water table ranges from 1.5 to 4 ft between December and May. Runoff is slow. Two Holmdel soils are found at the Charles Wood area: the Holmdel sandy loam, 0 to 2% slopes and the Holmdel sandy loam – urban land complex, with 0 to 5% slopes (HUA) (Jablonski and Baumley, 1989).

Soils classified as the Pits, Sand, and Gravel have been excavated for sand and graves. These areas are sand with varying amounts of gravel. The properties of these soils vary from place to place (Jablonski and Baumley, 1989).

The Shrewsbury sandy loam is a level poorly drained soil found in depressions along drainage ways and on broad flats. The first inch is a dark reddish-brown, matted, partly decomposed organic material and roots with 8 inches of black sandy loam below. The subsurface layer is a 4-inch thick dark gray sandy loam. The subsoil has a 9-inch thick mottled grayish brown sandy clay loam and 9 inches of mottled olive gray sandy clay loam. The substratum is a mottled dark greenish gray loamy sand. Permeability is moderate in the subsoil and moderately rapid in the substratum. The available water capacity is high. The seasonal high water table is between the surface and a depth of 1 foot from October to June. Runoff is slow and water ponds on the surface (Jablonski and Baumley, 1989).

Udorthent soils have been altered by excavating or filling (Jablonski and Baumley, 1989). In filled areas, these soils consist of loamy material that is more than 20 inches thick. Filled areas include flood plains, tidal marshes, and areas with moderately well-drained to very poorly-drained soils. Some Udorthent soils contain concrete, asphalt, metal, or glass.

The soils in the vicinity of the CW-7 site are classified as Shrewsbury Sandy Loam (Sn).

2.3.4 Topography and Surface Drainage

Over the last 80 years, the natural topography of Fort Monmouth has been altered by excavation and filling activities by the military. The land surface at the Main Post is relatively flat and ranges in elevation from 4 ft above mean sea level (msl) in the east at Oceanport Creek to 32 ft msl at the western end of the post, near Highway 35. The eastern half of the post is generally 10 ft msl in elevation.

At Charles Wood the land surface slopes from 72 ft msl in the southwest, to 20 ft. msl at the eastern end of the golf course. In general, the southwestern corner of Charles Wood is gently rolling and has the greatest relief.

The Charles Wood area is drained principally by two unnamed tributaries of Wampum Brook; one tributary flows eastward through the center of the camp, and the other flows along the southern boundary. East of Charles Wood, Wampum Brook is joined by

several other unnamed tributaries before it becomes Wampum Lake. Wampum Lake discharges into Mill Creek, which flows through the Main Post. Some runoff from the northwest part of the golf course flows into Lafetra Creek, which is located north of Tinton Avenue.

At Charles Wood, several wetland areas were identified on the FWS National Wetland Inventory Long Branch quadrangle map. The lake on the golf course is classified as palustrine open water/unknown bottom. Several areas along the unnamed tributaries to Wampum Brook are classified palustrine forested wetland, broad-leaved deciduous.

The CW-7 site is located up-gradient of Wampum Brook. The USGS topographic map (**Figure 1**) shows that the land surface of the site is relatively flat at an elevation of approximately 40 ft above mean sea level (msl). Surface water runoff from the CW-7 site is likely to flow southward towards Wampum Brook.

3.0 REMEDIAL ACTION ACTIVITIES

The details and results of remedial activities including the soil delineation sampling, soil excavation, and contaminated soil through disposal that occurred at the CW-7 site are described in the following sections.

3.1 Delineation Sampling

As a result of the findings of the SI Report, a Decision Document (**Appendix A**) was prepared by DPW and submitted to NJDEP describing the selected remedial alternative for Site CW-7. The selected remedial alternative encompassed excavation and offsite disposal of an estimated 410 cubic yards of contaminated soil. Excavation was determined to be the most cost effective approach for eliminating the identified contaminant of concern (i.e., PCBs) at the site and to achieve the respective NJDEP RDCSCC for PCBs (0.49 mg/Kg) in soil. Following completion of the excavation, confirmatory soil sampling was to be performed. The Decision Document was reviewed and approved by the NJDEP on 1 July 1997. TVS was then retained by the DPW to implement the selected remedial alternative in accordance with the Decision Document.

At Site CW-7, PCBs are the contaminants of concern and soil is the media of concern. The applicable remediation standard is the NJDEP RDCSCC for total PCBs in soil: 0.49 mg/Kg. The Decision Document (Appendix A) submitted by Fort Monmouth to NJDEP and approved on 1 July 1997 identified the applicable remediation standard of 0.49 mg/Kg for PCBs in soils for the proposed remedial action at Site CW-7.

3.1.1 Sampling Process

In May 1996, a remedial investigation (RI) was conducted at Site CW-7 to delineate the horizontal and vertical extent of PCBs in soil and to support the planned remedial action. The RI used a combination of field screening techniques and laboratory analyses. Collected soil samples were first evaluated in the field using the PCB Rapid Immunoassay Screen (RIS[®]) Soil Test System manufactured by ENSYS Inc. (A copy of the User's Guide for the ENSYS RIS[®] Soil Test System is provided in **Appendix C**). The ENSYS RIS[®] Soil Test System is a colorimetric test and three (3) PCB concentration categories were reported in the field screening: less than (<)0.5 mg/Kg, greater than (>)0.5 mg/Kg, and >50.0 mg/Kg. The initial soil samples at each location were collected from a sample depth of 0 to 1 foot. In locations where results of field screening showed that PCB concentrations were above the RDCSCC (i.e., >0.5 mg/Kg), another sample was collected one foot deeper at that location. This process continued until field screening concentrations less than 0.5 mg/Kg were observed.

A total of 67 soil samples were screened for PCBs from approximately 40 sample locations. **Figure 5** shows the sample locations and results of the field screening. Copies of the field screening data are provided in **Appendix D**. The results of field screening showed that PCB soil contamination was primarily distributed in the area surrounding the former transformer pad location near Building 2000. Surface soil samples indicated PCB

concentrations greater than 50 mg/Kg at six locations (Location Nos. 51, 52, 53, 61, 62, and 72). PCB concentrations were observed at distances up to 30 ft north of Building 2000, at which point surface soil PCB concentrations were found to be less than 0.5 mg/Kg. Subsurface concentrations were distributed in a similar pattern as the surface samples. Subsurface PCB concentrations were found to be less than the surface samples, yet still exceeded 0.5 mg/Kg to a depth of 4 to 5 ft bgs at several locations (Location Nos. 51, 53, and 61).

The depth of contamination decreased further north of the former transformer location. The PCB contamination was also observed to follow a drainage swale, which skirts the north side of Building 2000. Samples collected along the swale, 50 ft from the former transformer location and as deep as 4 ft bgs, were found to contain PCB concentrations above 0.5 mg/Kg.

Eight of the 67 samples (>10%) were submitted for laboratory analysis to confirm the PCB concentrations detected by field screening. **Table 1** provides a comparison of the field screening and laboratory analysis results. The laboratory results confirmed the observed range of PCBs in each of the 8 field screening samples. A copy of the confirmatory laboratory analytical results is provided in **Appendix E**.

Table 1
PCB Sampling Results – May 28 to 30, 1996

Location (Building No.)	Sample ID	Field Screening Results (mg/Kg)			Laboratory Analysis Total PCB Results (mg/Kg)
		0 to 0.5	0.5 to 50	>50	
2000	CW07-TR04		X		1.6*
2000	CW07-TR12	X			0.52*
2000	CW07-TR13	X			(U)
2000	CW07-TR32	X			0.32
2000	CW07-TR33	X			0.46
2000	CW07-TR53		X		1.6*
2000	CW07-TR61 (0-1')			X	72*
2000	CW07-TR61 (4-5')		X		6.8*

*Exceeds the NJDEP RDCSCC of 0.49 mg/kg.

(U) – Compound was not detected at or above the reporting limit.

3.1.2 Delineation Results

The field screening and laboratory analytical results indicated a surface area encompassing approximately 3,000 square ft (ft²) within which PCB concentrations exceeded 0.49 mg/Kg. Within this area of impacted soil, PCB contamination was found in certain locations to a maximum depth of approximately 6 ft. Based on the estimated surface area and varying depth of the PCB concentrations, the site was divided into five areas (Areas 1 to 5) for soil excavation and removal. (Note: Areas 1 and 2 include the same surface area but separate depths; Area 1 encompasses the identified area from 0 to 2 ft, and Area 2 from 2 to 6 ft.)

3.2 Remedial Activities

Based on the results of the RI and as presented in the Decision Document, excavation and removal of the delineated PCB contaminated soils was selected as the most cost effective remedial alternative for eliminating the identified contaminant of concern at Site CW-7. It was estimated that approximately 410 cubic yards of contaminated soil would be excavated and disposed offsite at an appropriate disposal facility. DPW then contracted TVS to implement the selected remedial alternative and then perform post-excavation soil sampling.

During all site investigation/remedial activities, hazards at the work site, which may have posed a threat to the Health and Safety of personnel, were minimized. A qualified individual utilizing air-monitoring devices monitored all areas that posed, or may have been suspected to pose, a vapor hazard. A copy of the Site Health and Safety Plan for the remedial activities performed at Site CW-7 is provided in **Appendix F**.

All sampling was performed in accordance with the methods described in the NJDEP *Field Sampling Procedures Manual*. Sampling frequency and parameters analyzed complied with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E). Analysis of the soil samples collected at Site CW-7 by TVS, was performed at the Fort Monmouth Environmental Laboratory, a New Jersey certified laboratory (Certification No. 13461).

Review of the analytical data report packages provided by the laboratory indicated that the analytical data is of good quality and is reliable. The data reports indicate that the appropriate analytical methods were used, holding times were met and duplicate and blank analyses showed good reproducibility. The method detection limits achieved by the laboratory, for the various analytes were below the established regulatory limits. The analytical data package is provided in **Appendix H**. The full data package, including quality control data, is on file at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey.

Soil excavation and post-excavation sampling activities at the 5 delineated areas were initially conducted between November 19 and 25, 1997. Sample locations and analytical results from the post-excavation sampling are depicted on **Figure 6**. The analytical

results are separately colored by sample depth and each analytical result that exceeded the RDCSCC has been “boxed” in “red”. All of the results are expressed in milligrams/Kilogram (mg/Kg). A summary of the post-excavation sample results is provided in **Table 2**. A summary of the excavation activities conducted at each of the five delineated areas is provided below.

Areas 1 and 2

On November 19, 1997, TVS initiated soil excavation activities in Areas 1 and 2 (see **Figure 5**). Soils were initially excavated to depths ranging from 0 to 2 ft bgs (Area 1) to approximately 2 to 6 to 8 ft bgs (Area 2). Following the excavation activities, 12 post-excavation samples were collected from depth intervals of 0 to 6 inches, 72 to 78 inches bgs, and 96 to 102 inches bgs. Analytical results indicated two samples with PCB concentrations exceeding the NJDEP RDCSCC at the following depths: Sample A1 at 24.9 mg/Kg, collected at 0 to 6 inches bgs, and Sample G at 47.5 mg/Kg, collected at 72 to 78 inches bgs.

Area 3

On November 21, 1997, excavation activities were initiated in Area 3. Soils were excavated to a depth of approximately 4 ft bgs. A total of 12 post-excavation samples were collected from the 48 to 54 inch depth interval. Analytical results indicated three samples with PCB concentrations exceeding the NJDEP RDCSCC: Samples M, O, and P at concentrations of 3.86 mg/Kg, 0.81 mg/Kg, and 0.76 mg/Kg, respectively.

Areas 4 and 5

On November 23, 1997, TVS conducted the excavation of Areas 4 and 5. Soils were excavated to a depth of approximately 2 ft bgs. A total of 19 post-excavation samples were collected from the 0 to 6 inch and 24 to 30 inch depth intervals. Analytical results indicated two samples within Area 4 at a sample depth of 24 to 30 inches with PCB concentrations exceeding the NJDEP RDCSCC: Sample X (0.86 mg/Kg) and Sample DD (0.61 mg/Kg). PCBs were not detected in the 3 post-excavation samples collected in Area 5 at a sample depth of 24 to 30.

In addition, 4 confirmatory samples (Samples II, JJ, KK, and LL) were collected further downgradient of the delineated excavation areas at a sample depth of 0 to 6 inches. In these samples, PCBs were not detected.

Based on the analytical results from the post-excavation sampling, it was determined that further delineation/excavation of PCB contaminated soils was required at Areas 1 and 2. Additional soil investigation in Areas 1 and 2 was then conducted by TVS to expand upon the initial post-excavation sampling and further delineate the extent of PCB impacted soil. On January 27, 1998, seven exploratory soil borings (depicted as A through G) were installed. Four soil samples were collected from each of the seven boring locations at the following sample depths: 0 to 6 inches, 12 to 18 inches, 24 to 30 inches, and 36 to 42 inches, totaling 28 samples. Analytical results for all the collected samples (see **Table 3**) were below the MDL.

The post-excavation sample results at Areas 3 and 4 were deemed appropriate for further evaluation using compliance averaging. Therefore, further delineation/excavation was not proposed at Areas 3 and 4. The results of compliance averaging for Areas 3 and 4 are presented in Section 3.5 of this RAR.

On February 9 and 10, 1998, based on the additional soil investigation, TVS excavated additional soils in Areas 1 and 2 at initial post-excavation sample locations A, B, G and H. Soils around locations G and H were excavated to a depth of 12 ft bgs, and soils around locations A and B were excavated to a depth of 0.5 ft bgs. Four post-excavation samples were collected (A3 and B3 at a depth of 0 to 6 inches bgs and H2 and G2 at a depth of 144 to 150 inches bgs). Analytical results indicated all samples to be below the MDL (see **Table 4**). Approximate limits of the excavation areas are depicted on **Figure 7**.

Upon receiving analytical results and confirming the effectiveness of the remedial activities completed at the site, the excavated areas were backfilled to grade with certified clean crushed stone and sand. Copies of the backfill receipts for sand and crushed stone used during the backfilling and site restoration efforts are provided in **Appendix G**.

3.3 UST Closure Activities

On November 19, 1997 during the excavation of Area 1, TVS encountered an unregulated 2,000-gallon No. 2 fuel oil underground storage tank (UST). The UST was immediately pumped out and cleaned. Approximately 380 gallons of residual sludge/water was pumped out of the UST and drummed for disposal. Following the UST removal, the tank was inspected for corrosion and leakage. The tank appeared to be in good condition, and there was no evidence that the tank or piping had leaked. In addition, TVS did not find the associated feed and return lines or the fill port. The UST was cleaned and transported off-site for recycling at the Mazza & Sons, Inc. facility, located in Tinton Falls, New Jersey. Disposal documentation for the UST is provided in **Appendix I**. Six post-excavation soil samples (Sample Numbers A through F) were collected on 26 February 1998 from the excavation at 96 to 102 inches in depth and submitted for Total Petroleum Hydrocarbons (TPHC) analysis. **Figure 7** shows the approximate location of the former UST and the post-excavation sample locations. Five of the six samples were found to be below the MDL. The sixth sample (Sample Location - F) was found to contain TPHC at a concentration of 238 mg/Kg which is below the NJDEP criteria for Total Volatile Organic Contaminants (1,000 mg/kg) and the NJDEP Cleanup Criteria for Total Organic Contaminants (10,000 mg/kg) and therefore, no further action was warranted. Additionally, no groundwater was encountered in the UST excavation; therefore no groundwater sample was collected. **Table 5** summarizes the analytical data results from the UST post-excavation sampling.

3.4 Schedule of Site Activities

A schedule of site activities regarding the SI, remedial investigations, and remedial action activities at Site CW-7 is provided below.

1 & 2 December 1994	WESTON Site Investigation activities.
May - June 1996	Remedial Investigation activities for soils conducted by DPW
1 July 1997	Decision Document approved by NJDEP.
November 1997	Soil excavation performed and post-excavation sampling conducted, UST removal/disposal completed, PCB contaminated soils transported to CWM Chemical Services, Inc. Model City, NY.
27 January 1998	Additional soil investigation activities initiated in Areas 1 and 2.
9-10 February 1998	Additional soil excavation in Areas 1 & 2 performed and post-excavation sampling conducted, backfilling activities and site restoration completed.
26 February 1998	UST post-excavation soil sampling and waste characterization sampling of stockpiled soil performed.
June 1998	Certificate of Destruction and Recycling for the thermally treated soil.

3.5 Compliance Averaging

In evaluating the analytical results of the post-excavation sampling at Areas 3 and 4 in comparison to the applicable remediation standards as required by N.J.A.C. 7:26E-4.8(c)3i, it was deemed appropriate that “compliance averaging” be used to determine compliance with the respective NJDEP RDCSCC for PCBs in soil (i.e., 0.49mg/Kg),. Compliance averaging uses the average contaminant concentration in an area of concern rather than the contaminant concentration of individual samples for comparison to applicable remediation standards or Soil Cleanup Criteria. To support this evaluation, the guidance and NJDEP policy presented in an article entitled “Compliance Averaging” from the NJDEP Spring 1995 issue of *Site Remediation News* (Volume 7, No. 2, Article 08) was utilized.

Typically, in performing compliance averaging, once a sample location exceeding the RDCSCC had been identified, the first step would be a comparison to site background concentrations. However, given that comparison to background concentrations would not be applicable for PCBs, an exceedence was first evaluated for consideration as “marginal” (i.e., 1 to 2 mg/Kg above the RDCSCC). If this was the case, the exceedence was then compared to the immediate surrounding sample locations. If the surrounding sample locations did not have any exceedences of the RDCSCC, no further action was recommended for that particular exceedence.

If the aforementioned exceedence could not be considered marginal, the exceedence was evaluated by averaging the exceedence value with the values for the immediate

surrounding sample locations at the same sample depth that did not have an exceedence of the RDCSCC. Where the surrounding sample locations had values of non-detect, one-half the respective MDL was used. After averaging the values, if the compliance averaged result was below the RDCSCC, it was recommended for no further action. If the compliance averaged result was marginally above the RDCSCC and the exceedence was isolated, no further action was also recommended. If the compliance averaged result was more than marginally above the RDCSCC, it was evaluated for a small quantity, de minimus exceedence or for further action. The results of further evaluation and compliance averaging for the exceedences in Areas 3 and 4 are provided below.

Area 3

Area 3 had three (3) exceedences of the RDCSCC at Sample Locations M (3.86 mg/Kg), O (0.81 mg/Kg), and P (0.76 mg/Kg). In each instance the detection was for PCB Arochlor 1260. No other PCBs were detected. The exceedences at Sample Locations P and O were considered to be marginal exceedences when compared to the RDCSCC of 0.49 mg/Kg or de minimus quantities given the sample depth and the excavation efforts conducted and no further action is recommended. The exceedence at Sample Location M has been evaluated utilizing compliance averaging. The table below lists the exceedence and the samples used from the sample depth of 48 to 54 inches to compliance average for Arochlor 1260.

Performance of Compliance Averaging – Area 4

Sample Location	Arochlor 1260 Concentration (mg/Kg)
M	3.86
N	0.29
K	0.025*
L	0.025*
J	0.025*
Average of 5 samples	0.85
Arochlor 1260 NJDEP RDCSCC – 0.49 mg/Kg	

Note: Exceedence indicated by bold script

* ½ MDL (0.05 mg/Kg)

The result of compliance averaging for Sample Location M is 0.85 mg/Kg, which can be considered marginal when compared to the RDCSCC of 0.49 mg/Kg and given the sample depth and the excavation efforts conducted and no further action is recommended.

Area 4

Area 4 had two (2) exceedences of the RDCSCC at Sample Location DD (0.61 mg/Kg) and Sample Location X (0.86 mg/Kg) taken at a sample depth of 24 to 30 inches. In each instance the detection was for PCB Arochlor 1260. No other PCBs were detected. Both of these sample results were considered to be marginal exceedences when compared to

the RDCSCC of 0.49 mg/Kg or de minimus quantities given the sample depth and the excavation efforts conducted and no further action is recommended.

4.0 FINDINGS/REMEDIAL ACTIONS

The findings of the remedial activities, as well as the details of the waste disposal activities performed at the CW-7 site, are summarized in the following sections.

4.1 Remedial Action Effectiveness

The RI used a combination of field screening techniques and laboratory analyses. A total of 67 soil samples were screened for PCBs from approximately 40 sample locations. The field screening and laboratory analytical results indicated a surface area encompassing approximately 3,000 ft² within which PCB concentrations exceeded 0.49 mg/Kg, the respective NJDEP RDCSCC for PCBs in soil. Within this area of impacted soil, PCB contamination was found at varying depths to a maximum depth of approximately 6 ft. Based on the estimated surface area and varying depths of PCB concentrations exceeding the established remediation standard, the site was divided into five areas (Areas 1 through 5) for soil excavation and removal.

Soil excavation activities were initiated by TVS at Site CW-7 on November 19 1997. Post-excavation soil samples were then collected from the five excavation areas (Areas 1, 2, 3, 4 and 5) and analytical results in Areas 1, 2, 3, and 4 indicated PCB levels that exceeded the NJDEP RDCSCC for PCBs in soils. In evaluating the analytical results from the post-excavation sampling, it was determined that further delineation/excavation of PCB contaminated soils was required at Areas 1 and 2. However, the post-excavation sample results at Areas 3 and 4 were deemed appropriate for further evaluation using compliance averaging. Therefore, further delineation/excavation was not proposed at Areas 3 and 4. The post-excavation results at Area 5 indicated no further action was required.

On January 27, 1998, TVS conducted an additional round of soil sampling activities to better delineate the extent of PCB contamination within Areas 1 and 2. A total of 28 samples were collected and submitted for PCB analysis and revised excavation areas established. TVS then performed additional excavation at sample locations A, B, G and H. The post-excavation samples collected subsequent to the additional excavation indicated no PCB concentrations above the MDL. Four confirmatory samples were also collected further downgradient of the delineated excavation areas at a sample depth of 0 to 6 inches. These samples also did not detect PCBs above the MDL.

Compliance averaging conducted at Areas 3 and 4 indicated average concentrations that were considered marginal exceedances. This included an average concentration of 0.85 mg/Kg at Area 3 and two marginal exceedances at Area 4 of 0.61 mg/Kg and 0.86 mg/Kg.

In addition, during the excavation of Area 1, TVS encountered an unregulated 2,000-gallon No. 2 fuel oil UST. Residual waste from the UST was removed, the UST was cleaned and removed and transported offsite for proper disposition. Six post-excavation soil samples were collected from the excavation at 96 to 102 inches in depth and

submitted TPHC analysis. Five of the six samples were found to be below the MDL and the sixth sample was found to contain TPHC at a concentration of 238 mg/Kg, which is below the NJDEP criteria for Total Volatile Organic Contaminants (1,000 mg/kg) and the NJDEP Cleanup Criteria for Total Organic Contaminants (10,000 mg/kg). Additionally, no groundwater was encountered in the UST excavation; therefore no groundwater sample was collected.

4.2 Soil Disposal

A total of approximately 294 cubic yards of soil was excavated and placed in thirteen (13) stockpiles during the remedial activities. Excavated soils determined to contain PCB concentrations exceeding 50 mg/Kg were separately stockpiled and managed as a Toxic Substances Control Act (TSCA) waste. The stockpiled contaminated soil was both placed upon and covered with tarps. All excavated soil characterization and disposal was handled directly by the DPW. Composite samples from the 13 soil stockpiles were collected and submitted for waste characterization analysis for off-site disposal for: TPHC; PCBs; benzene, toluene, ethylbenzene, and xylenes (BTEX), and hazardous waste characteristics, including performance of Toxicity Characteristic Leaching Procedure (TCLP) analysis. A summary of the analytical results from the waste characterization sampling is provided in **Table 6**. The analytical data package is provided in **Appendix J**.

Approximately 44 cubic yards of soil determined to contain PCB concentrations greater than 50 mg/Kg (and thereby a TSCA regulated waste) were stockpiled separately. DPW transported the 44 cubic yards of PCB soils to CWM Chemical Services Inc., a permitted TSCA facility, located in Model City, New York. The soils were transported under State of New York hazardous waste manifests. The remaining 250 cubic yards of stockpiled soil were transported to a thermal treatment facility, located in New Castle, Delaware, under standard non-hazardous waste manifests. Copies of the hazardous and non-hazardous waste manifests and the Certificates of Disposal for the thermally treated soil are provided in **Appendix K**.

4.3 Recommendations

Fort Monmouth is a Federal facility and as such, no deed exists. No further action is proposed in regard to Site CW-7 and the Master Plan for Fort Monmouth will be modified to identify CW-7 Site and the remedial actions conducted. No restrictions are proposed regarding future use of this site.

5.0 REFERENCES

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TABLES

TABLE 2
POST EXCAVATION SOIL SAMPLING - PCB DATA SUMMARY
November 19-25, 1997
Site CW-7
Fort Monmouth, New Jersey

Laboratory Sample ID#	Field Sample Location	Excavation Area(s)	Depth (bgs)	Date of Collection	Result (mg/kg)	MDL
3165.01	A2	1/2	96-102"	11/19/97	ND	0.35
3165.02	B2	1/2	96-102"	11/19/97	ND	0.35
3165.03	C	1/2	96-102"	11/19/97	ND	0.35
3165.04	D	1/2	96-102"	11/19/97	ND	0.35
3165.05	E	1/2	96-102"	11/19/97	ND	0.35
3165.06	F	1/2	96-102"	11/19/97	ND	0.35
3168.01	A1	1/2	0-6"	11/20/97	24.9	0.35
3168.02	B1	1/2	0-6"	11/20/97	ND	0.35
3168.03	C1	1/2	0-6"	11/20/97	ND	0.35
3168.04	G	1/2	72-78"	11/20/97	47.5	0.35
3168.05	H	1/2	72-78"	11/20/97	ND	0.35
3168.06	I	1/2	72-78"	11/20/97	ND	0.35
3178.01	J	3	48-54"	11/21/97	ND	0.35
3178.02	K	3	48-54"	11/21/97	ND	0.35
3178.03	L	3	48-54"	11/21/97	ND	0.35
3178.04	M	3	48-54"	11/21/97	3.86	0.35
3178.05	N	3	48-54"	11/21/97	0.29	0.35
3178.06	O	3	48-54"	11/21/97	0.81	0.35
3179.01	P	3	48-54"	11/23/97	0.76	0.35
3179.02	Q	3	48-54"	11/23/97	0.22	0.35
3179.03	R	3	48-54"	11/23/97	ND	0.35
3179.04	S	3	48-54"	11/23/97	ND	0.35
3179.05	T	3	48-54"	11/23/97	0.11	0.35
3179.06	U	3	48-54"	11/23/97	ND	0.35
3179.07	V1	4	0-6"	11/23/97	0.06	0.35
3179.08	V2	4	48-54"	11/23/97	ND	0.35
3182.01	W	4	24-30"	11/25/97	ND	0.35
3182.02	X	4	24-30"	11/25/97	0.86	0.35
3182.03	Y	4	24-30"	11/25/97	ND	0.35
3182.04	Z	4	24-30"	11/25/97	0.11	0.35
3182.05	AA	4	24-30"	11/25/97	0.28	0.35
3182.06	BB	4	24-30"	11/25/97	ND	0.35
3182.07	CC	4	24-30"	11/25/97	ND	0.35
3182.08	DD	4	24-30"	11/25/1997	0.61	0.35
3182.09	EE1	4	0-6"	11/25/1997	0.43	0.35
3182.10	EE2	4	24-30"	11/25/1997	ND	0.35
3182.11	FF	5	24-30"	11/25/1997	ND	0.35
3182.12	GG	5	24-30"	11/25/1997	ND	0.35
3182.13	HH	5	24-30"	11/25/1997	ND	0.35
3182.14	II	-	0-6"	11/25/1997	ND	0.35
3182.15	JJ	-	0-6"	11/25/1997	ND	0.35
3182.16	KK	-	0-6"	11/25/1997	ND	0.35
3182.17	LL	-	0-6"	11/25/1997	ND	0.35

Notes:

mg/Kg = milligrams per Kilogram

ND = Not Detected

MDL = Method Detection Limit

Shaded areas = PCB exceedances (>0.49 mg/Kg)

bgs = below ground surface

TABLE 3
ADDITIONAL SOIL INVESTIGATION - PCB DELINEATION
January 27, 1998
Site CW-7
Fort Monmouth, New Jersey

Laboratory Sample ID#	Field Sample Location	Depth (bgs)	Date of Collection	Result (mg/kg)	MDL
3299.01	A1	0-6"	01/27/98	ND	0.35
3299.02	A2	12-18"	01/27/98	ND	0.35
3299.03	A3	24-30"	01/27/98	ND	0.35
3299.04	A4	36-42"	01/27/98	ND	0.35
3299.05	B1	0-6"	01/27/98	ND	0.35
3299.06	B2	12-18"	01/27/98	ND	0.35
3299.07	B3	24-30"	01/27/98	ND	0.35
3299.08	B4	36-42"	01/27/98	ND	0.35
3299.09	C1	0-6"	01/27/98	ND	0.35
3299.10	C2	12-18"	01/27/98	ND	0.35
3299.11	C3	24-30"	01/27/98	ND	0.35
3299.12	C4	36-42"	01/27/98	ND	0.35
3299.13	D1	0-6"	01/27/98	ND	0.35
3299.14	D2	12-18"	01/27/98	ND	0.35
3299.15	D3	24-30"	01/27/98	ND	0.35
3299.16	D4	36-42"	01/27/98	ND	0.35
3299.17	E1	0-6"	01/27/98	ND	0.35
3299.18	E2	12-18"	01/27/98	ND	0.35
3299.19	E3	24-30"	01/27/98	ND	0.35
3299.20	E4	36-42"	01/27/98	ND	0.35
3299.21	F1	0-6"	01/27/98	ND	0.35
3299.22	F2	12-18"	01/27/98	ND	0.35
3299.23	F3	24-30"	01/27/98	ND	0.35
3299.24	F4	36-42"	01/27/98	ND	0.35
3299.25	G1	0-6"	01/27/98	ND	0.35
3299.26	G2	12-18"	01/27/98	ND	0.35
3299.27	G3	24-30"	01/27/98	ND	0.35
3299.28	G4	36-42"	01/27/98	ND	0.35
3299.29	DUP	-	01/27/98	ND	0.35
3299.30	Field Blank	-	01/27/98	ND	-

Notes:

ND = Not Detected

MDL = Method Detection Limit

mg/kg = milligrams per kilograms

bgs = below ground surface

TABLE 4
POST EXCAVATION SOIL SAMPLING - PCB DATA SUMMARY
February 9-10, 1998
Site CW-7
Fort Monmouth, New Jersey

Laboratory Sample ID#	Field Sample Location	Depth (bgs)	Date of Collection	Result (mg/kg)	MDL
3326.01	G2	144-150"	2/9/1998	ND	0.35
3326.02	H2	144-150"	2/9/1998	ND	0.35
3330.01	A3	0-6"	2/10/1998	ND	0.35
3330.02	B3	0-6"	2/10/1998	ND	0.35

Notes:

ND = Not Detected

MDL = Method Detection Limit

mg/kg = milligram per kilogram

bgs = below ground surface

TABLE 5
UNDERGROUND STORAGE TANK - POST EXCAVATION SAMPLES
TPHC - Data Summary
Site CW-7
Fort Monmouth, New Jersey

SAMPLE	FIELD ID	SAMPLE DATE	DILUTION FACTOR	MDL (mg/Kg)	TPHC Result (mg/Kg)
3166.01	2000-A2 (96-102")	2/26/1998	1.00	184	ND
3166.02	2000-B2 (96-102")	2/26/1998	1.00	186	ND
3166.03	2000-C2 (96-102")	2/26/1998	1.00	192	ND
3166.04	2000-D2 (96-102")	2/26/1998	1.00	197	ND
3166.05	2000-E2 (96-102")	2/26/1998	1.00	212	ND
3166.06	2000-F2 (96-102")	2/26/1998	1.00	173	237.92

ND - Indicates that the compound was not detected at or below the quantification limits

MDL - Method Detection Limit

mg/Kg - milligrams per Kilogram

TABLE 6
SOIL STOCKPILE - WASTE CHARACTERIZATION
Total Petroleum Hydrocarbon (TPHC) Analysis
Site CW-7
Fort Monmouth, New Jersey

SAMPLE	FIELD ID	SAMPLE DATE	DILUTION FACTOR	MDL (mg/kg)	TPHC Result (mg/kg)
3367.01	SP-1	2/26/1998	1.00	200	ND
3367.02	SP-2	2/26/1998	1.00	203	241.53
3367.03	SP-3	2/26/1998	1.00	179	ND
3367.04	SP-4	2/26/1998	1.00	187	ND
3367.05	SP-5	2/26/1998	1.00	188	ND
3367.06	SP-6	2/26/1998	1.00	189	ND
3367.07	SP-7	2/26/1998	1.00	192	ND
3367.08	SP-8	2/26/1998	1.00	188	ND
3367.09	SP-9	2/26/1998	1.00	195	ND
3367.10	SP-10	2/26/1998	1.00	203	359.78
3367.11	SP-11	2/26/1998	1.00	191	ND
3367.12	SP-12	2/26/1998	1.00	177	353.95
3367.13	SP-13	2/26/1998	1.00	195	237.07
3367.14	FIELD DUP	2/26/1998	1.00	194	1319.12

ND - Indicates that the compound was not detected at or below the quantification limits

MDL - Method Detection Limit

mg/kg - milligrams per kilogram

TABLE 6 (cont.)
SOIL STOCKPILE - WASTE CHARACTERIZATION
Total Polychlorinated Biphenyls (PCBs) Analysis
Site CW-7
Fort Monmouth, New Jersey

SAMPLE	FIELD ID	SAMPLE DATE	MDL (mg/kg)	Total PCBs Result (mg/kg)
3367.01	SP-1	2/26/1998	0.35	0.12
3367.02	SP-2	2/26/1998	0.35	1.92
3367.03	SP-3	2/26/1998	0.35	0.15
3367.04	SP-4	2/26/1998	0.35	1.76
3367.05	SP-5	2/26/1998	0.35	14.20
3367.06	SP-6	2/26/1998	0.35	4.10
3367.07	SP-7	2/26/1998	0.35	2.11
3367.08	SP-8	2/26/1998	0.35	0.47
3367.09	SP-9	2/26/1998	0.35	3.85
3367.10	SP-10	2/26/1998	0.35	1.18
3367.11	SP-11	2/26/1998	0.35	0.22
3367.12	SP-12	2/26/1998	0.35	1.27
3367.13	SP-13	2/26/1998	0.35	1.50
3367.14	FIELD DUP	2/26/1998	0.35	ND

ND - Indicates that the compound was not detected at or below the quantification limits

MDL - Method Detection Limit

Results are reported on a Dry Wt. Basis

mg/kg - milligrams per kilogram

TABLE 6 (cont.)
COMPOSITE SOIL STOCKPILE - WASTE CHARACTERIZATION
Benzene, Toluene, Ethylbenzene, Xylene (BTEX) - Analysis
Site CW-7
Fort Monmouth, New Jersey

SAMPLE ANALYTE	SAMPLE DATE	SP1-3 (ug/kg)	SP4-6 (ug/kg)	SP7-9 (ug/kg)	SP10-13 (ug/kg)
Benzene	2/26/1998	1 U	1 U	1 U	1 U
Toluene	2/26/1998	1 U	1 U	1 U	1 U
Ethylbenzene	2/26/1998	3 U	2 U	2 U	2 U
m+p-Xylenes	2/26/1998	4 U	4 U	4 U	3 U
o-Xylene	2/26/1998	3 U	2 U	2 U	2 U

U - Not detected above the method detection limit

ug/kg - micrograms per kilogram

TABLE 6 (cont.)
COMPOSITE SOIL STOCKPILE - WASTE CHARACTERIZATION
TCLP Analysis - Volatiles
Site CW-7
Fort Monmouth, New Jersey

SAMPLE	SAMPLE DATE	SP1-3 mg/L	SP4-6 mg/L	SP7-9 mg/L	SP10-13 mg/L	Regulatory Level mg/L	MDL mg/L
Vinyl Chloride	2/26/1998	ND	ND	ND	ND	0.2	0.0026
1,1-Dichloroethene	2/26/1998	ND	ND	ND	ND	0.7	0.0007
2-Butanone	2/26/1998	ND	ND	ND	ND	200	0.0021
Chloroform	2/26/1998	ND	ND	ND	ND	6	0.0004
Carbon Tetrachloride	2/26/1998	ND	ND	ND	ND	0.5	0.0012
Benzene	2/26/1998	ND	ND	ND	ND	0.5	0.0005
1,2-Dichloroethane	2/26/1998	ND	ND	ND	ND	0.5	0.0013
Trichloroethene	2/26/1998	ND	ND	ND	ND	0.5	0.0009
Tetrachloroethene	2/26/1998	ND	ND	ND	ND	0.7	0.0009
Chlorobenzene	2/26/1998	ND	ND	ND	ND	100	0.0007

ND - Indicates that the compound was not detected at or below the quantification limits

MDL = Method Detection Limit

mg/L - milligrams per liter

TABLE 6 (cont.)
COMPOSITE SOIL STOCKPILE - WASTE CHARACTERIZATION
TCLP Analysis - Semi-Volatiles
Site CW-7
Fort Monmouth, New Jersey

SAMPLE	SAMPLE DATE	SP1-3 ug/L	SP4-6 ug/L	SP7-9 ug/L	SP10-13 ug/L	Regulatory Level mg/L	MDL ug/L
Pyridine	2/26/1998	ND	ND	ND	ND	5.00	5.00
1,4-Dichlorobenzene	2/26/1998	ND	ND	ND	ND	7.50	0.23
2-Methylphenol (o-cresol)	2/26/1998	ND	ND	ND	ND	200.00	0.14
4-Methylphenol (m,p-cresol)	2/26/1998	ND	ND	ND	ND	200.00	0.14
Hexachloroethane	2/26/1998	ND	ND	ND	ND	3.00	0.33
Nitrobenzene	2/26/1998	ND	ND	ND	ND	2.00	0.46
Hexachlorobutadiene	2/26/1998	ND	ND	ND	ND	0.50	0.38
2,4,6-Trichlorophenol	2/26/1998	ND	ND	ND	ND	2.00	0.42
2,4,5-Trichlorophenol	2/26/1998	ND	ND	ND	ND	400.00	0.31
2,4-Dinitrotoluene	2/26/1998	ND	ND	ND	ND	0.13	0.36
Hexachlorobenzene	2/26/1998	ND	ND	ND	ND	0.13	0.82
Pentachlorophenol	2/26/1998	ND	ND	ND	ND	100.00	1.08

ND - Indicates that the compound was not detected at or below the quantification limits

MDL = method Detection Limit

mg/L - milligrams per liter

ug/L - micrograms per liter

TABLE 6 (cont.)
COMPOSITE SOIL STOCKPILE - WASTE CHARACTERIZATION
TCLP Analysis - Pesticides
Site CW-7
Fort Monmouth, New Jersey

SAMPLE ANALYTE	SAMPLE DATE	SP1-3 mg/L	SP4-6 mg/L	SP7-9 mg/L	SP10-13 mg/L	Regulatory Level mg/L	MDL mg/L
Chlordane	2/26/1998	ND	ND	ND	ND	0.03	0.00014
Endrin	2/26/1998	ND	ND	ND	ND	0.02	0.00003
Heptachlor	2/26/1998	ND	ND	ND	ND	0.01	0.00003
Heptachlor Epoxide	2/26/1998	ND	ND	ND	ND	0.01	0.00002
Lindane	2/26/1998	ND	ND	ND	ND	0.40	0.00003
Methoxychlor	2/26/1998	ND	ND	ND	ND	10.00	0.00010
Toxaphene	2/26/1998	ND	ND	ND	ND	0.50	0.00020

ND - Indicates that the compound was not detected at or below the quantification limits

MDL = method Detection Limit

mg/L - milligrams per liter

TABLE 6 (cont.)
COMPOSITE SOIL STOCKPILE - WASTE CHARACTERIZATION
TCLP Analysis - Metals
Site CW-7
Fort Monmouth, New Jersey

SAMPLE ANALYTE	SAMPLE DATE	SP1-3 mg/L	SP4-6 mg/L	SP7-9 mg/L	SP10-13 mg/L	Regulatory Level mg/L	MDL mg/L
Arsenic	2/26/1998	ND	ND	ND	ND	5	0.004
Barium	2/26/1998	1.138	0.699	0.195	0.915	100	0.001
Cadmium	2/26/1998	0.001	ND	0.001	ND	1	0.001
Chromium	2/26/1998	ND	ND	ND	ND	5	0.001
Lead	2/26/1998	0.025	0.069	0.101	0.023	5	0.004
Mercury	2/26/1998	ND	ND	ND	ND	0.2	0.0002
Selenium	2/26/1998	0.009	0.007	0.008	0.008	1	0.006
Silver	2/26/1998	ND	ND	ND	0.03	5	0.006

All Results in mg/L

ND - Indicates that the compound was not detected at or below the quantification limits

MDL = Method Detection Limit

mg/L - milligrams per liter

TABLE 6 (cont.)
COMPOSITE SOIL STOCKPILE - WASTE CHARACTERIZATION
Hazardous Waste Characterization - Ignitability
Site CW-7
Fort Monmouth, New Jersey

LABORATORY ID#	Sample Location/Identification	Flashpoint °F
3367.01-03	Composite	>140
3367.04-06	Composite	>140
3367.07-09	Composite	>140
3367.10-13	Composite	>140

TABLE 6 (cont.)
COMPOSITE SOIL STOCKPILE - WASTE CHARACTERIZATION
Hazardous Waste Characterization - pH
Site CW-7
Fort Monmouth, New Jersey

LABORATORY ID#	Sample Location/Identification	pH
3367.01-03	Composite	5.23
3367.04-06	Composite	5.39
3367.07-09	Composite	5.14
3367.10-13	Composite	5.40

TABLE 6 (cont.)
COMPOSITE SOIL STOCKPILE - WASTE CHARACTERIZATION
Hazardous Waste Characterization - Reactivity and TCLP Analysis - Herbicides
Site CW-7
Fort Monmouth, New Jersey

SAMPLE	SAMPLE DATE	MDL	PQL	3367.01-03	3367.04-06	3367.07-09	3367.10-13
% Solids	2/26/1998			80	82	76	81
Reactive Cyanide (mg/kg)	2/26/1998	100	100	ND	ND	ND	ND
Reactive Sulfide (mg/kg)	2/26/1998	250	250	ND	ND	ND	ND
TCLP Herbicides (mg/L)							
2,4-D	2/26/1998	0.00046	0.002	U	U	U	U
Silvex	2/26/1998	0.00066	0.002	U	U	U	U
Total Organic Halide (mg/kg)	2/26/1998	25	25	ND	ND	ND	ND

MDL = Method Detection Limit

MDL used for 600 and 200 series methods. PQL used for SW846 methods.

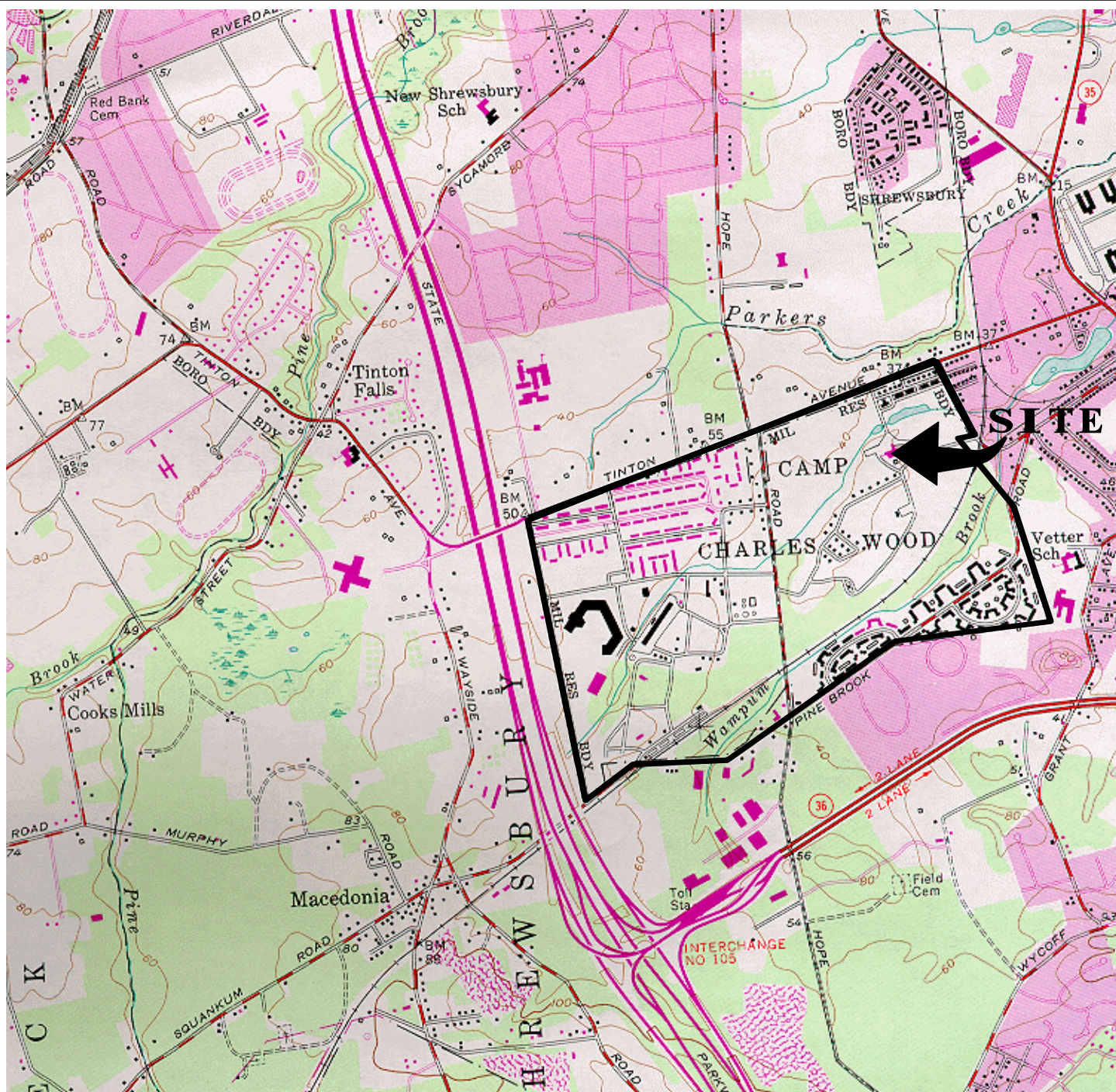
ND = Not Detected above Method Detection Limit

U - Undetected

mg/kg - milligrams per kilogram

mg/L - milligrams per liter

FIGURES



LONG BRANCH, N. J.

40073-C8-TF-024

1954

PHOTOREVISED 1981

DMA 6164 I SE-SERIES V822



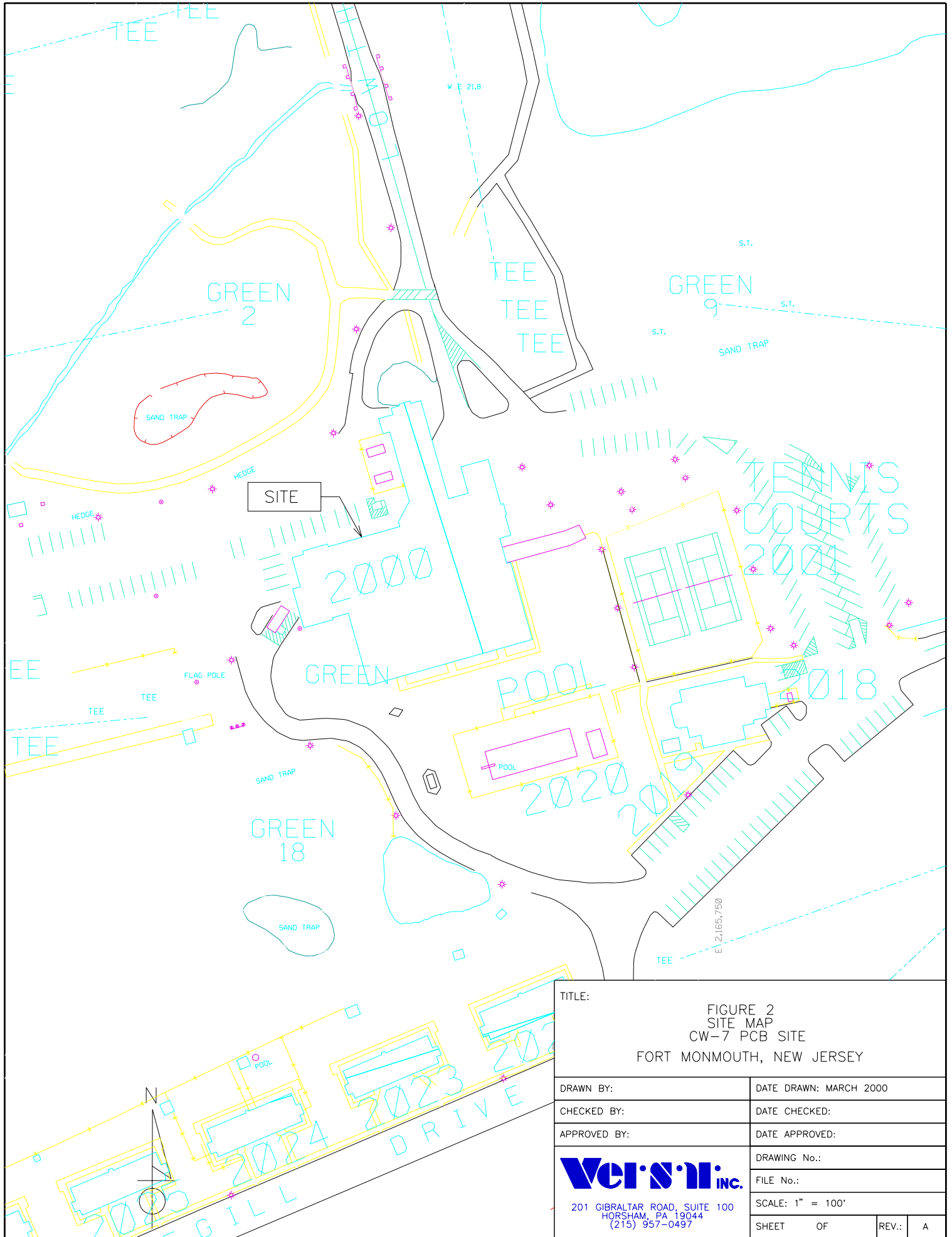
QUADRANGLE LOCATION


Figure 1
Site Location Map
CW-7 PCB Site

Fort Monmouth, New Jersey

Versar INC. 201 Gibraltar Road, Suite 100
Horsham, PA 19044
(215) 957-0955

Mapped, edited and published by the Geological Survey



TITLE: FIGURE 2 SITE MAP CW-7 PCB SITE FORT MONMOUTH, NEW JERSEY			
DRAWN BY:		DATE DRAWN: MARCH 2000	
CHECKED BY:		DATE CHECKED:	
APPROVED BY:		DATE APPROVED:	
 201 GIBRALTAR ROAD, SUITE 100 HORSHAM, PA 19044 (215) 957-0497		DRAWING No.:	
		FILE No.:	
		SCALE: 1" = 100'	
SHEET		OF	REV.: A

Geologic Map of New Jersey

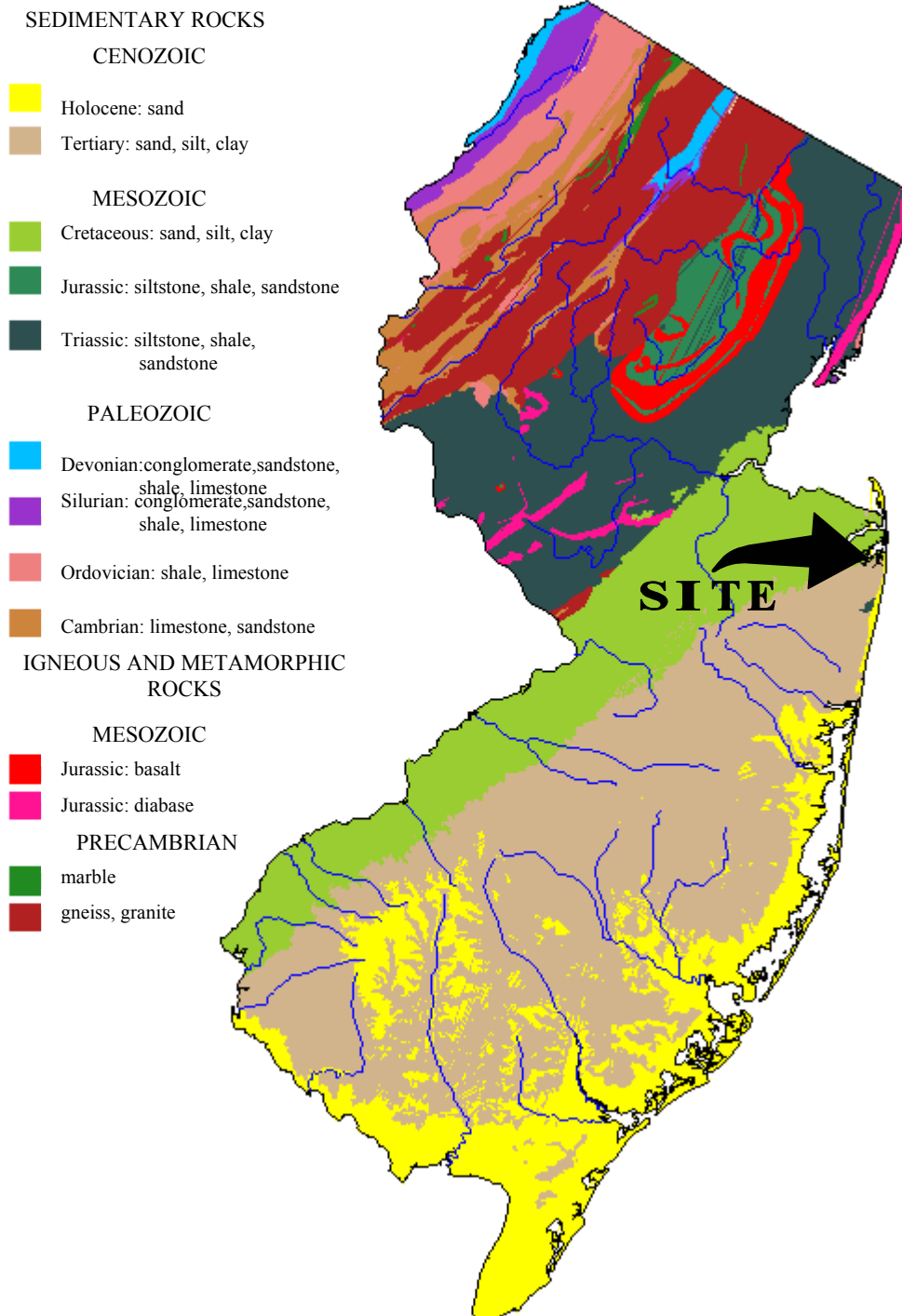
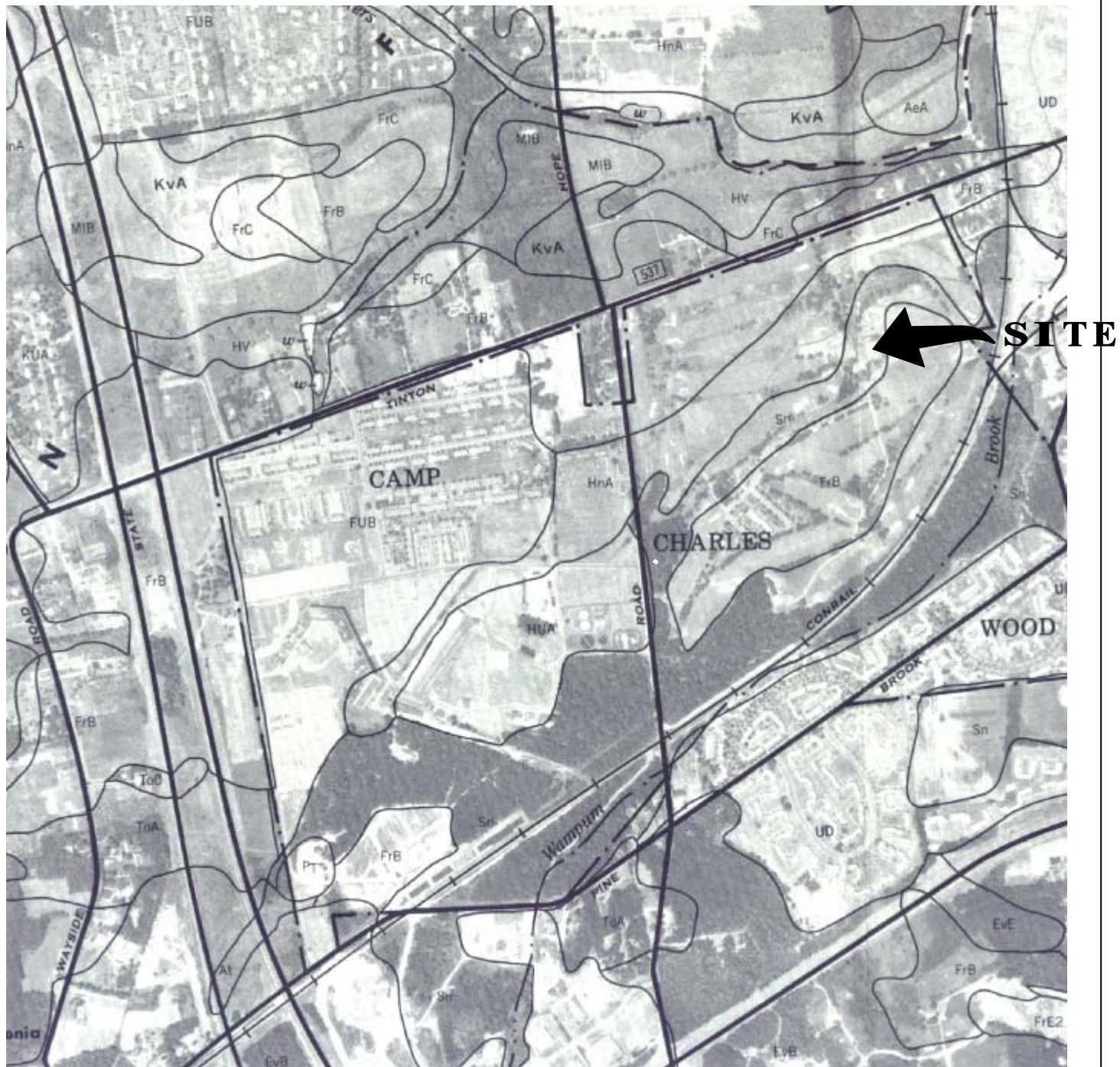


FIGURE 3
Geologic Map of New Jersey
CW-7 PCB Site
Fort Monmouth, New Jersey

Versar INC.

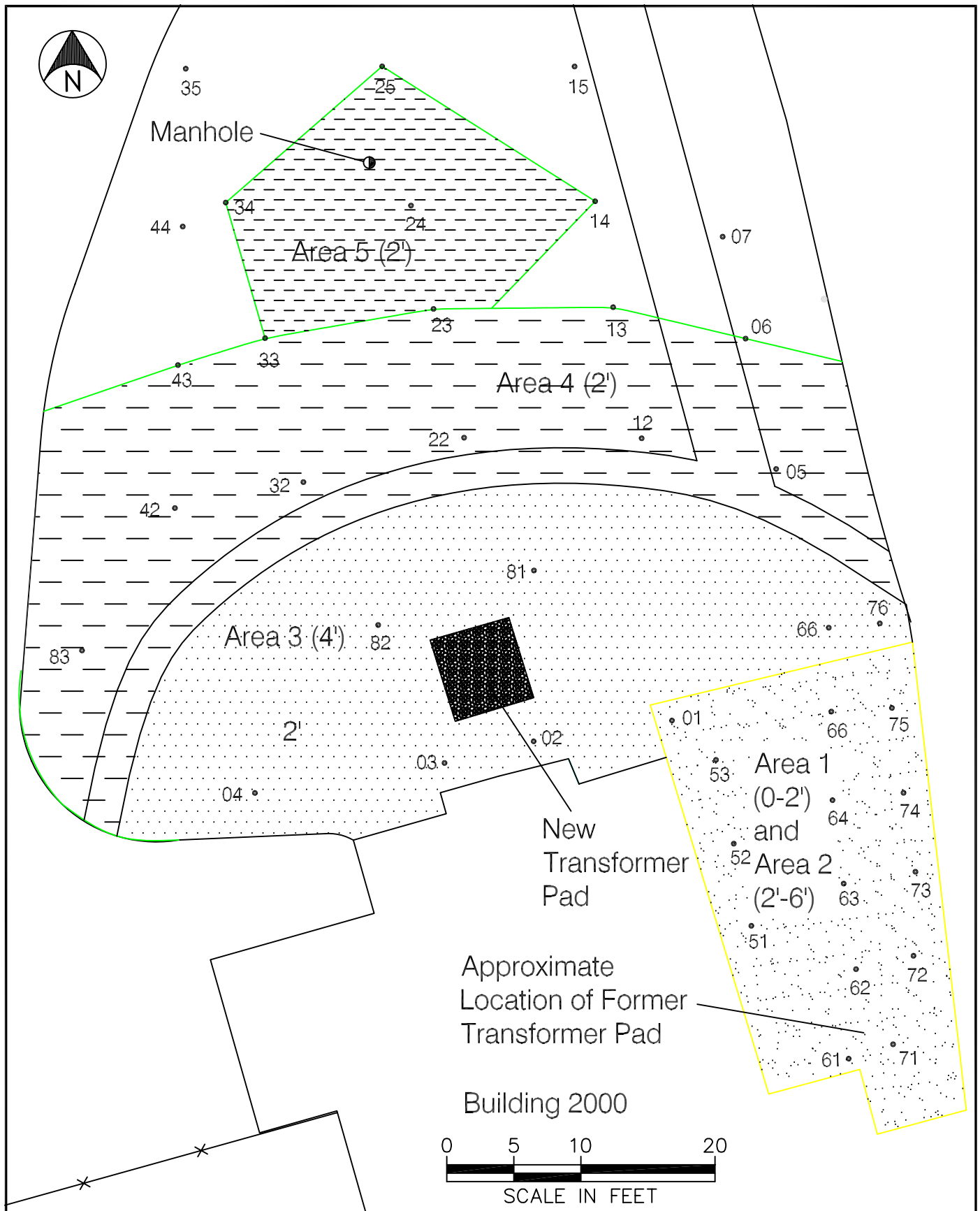
201 Gibraltar Road, Suite 100
Horsham, PA 19044
(215) 957-0955



US Department of Agriculture
Soil Conservation Service
Soil Survey of Monmouth County, NJ
April 1989

Figure 4
Soil Map of Monmouth County
CW-7 PCB Site
Fort Monmouth, New Jersey

Versar INC. 201 Gibraltar Road, Suite 100
Horsham, PA 19044
(215) 957-0955



Versar INC.

2558 PEARL BUCK ROAD, SUITE 1
BRISTOL, PA 19007
(215)788-7844

FIGURE 5

ESTIMATED EXTENT OF PCB CONTAMINATION
BUILDING 2000 CHARLES WOOD AREA
SITE CW-7

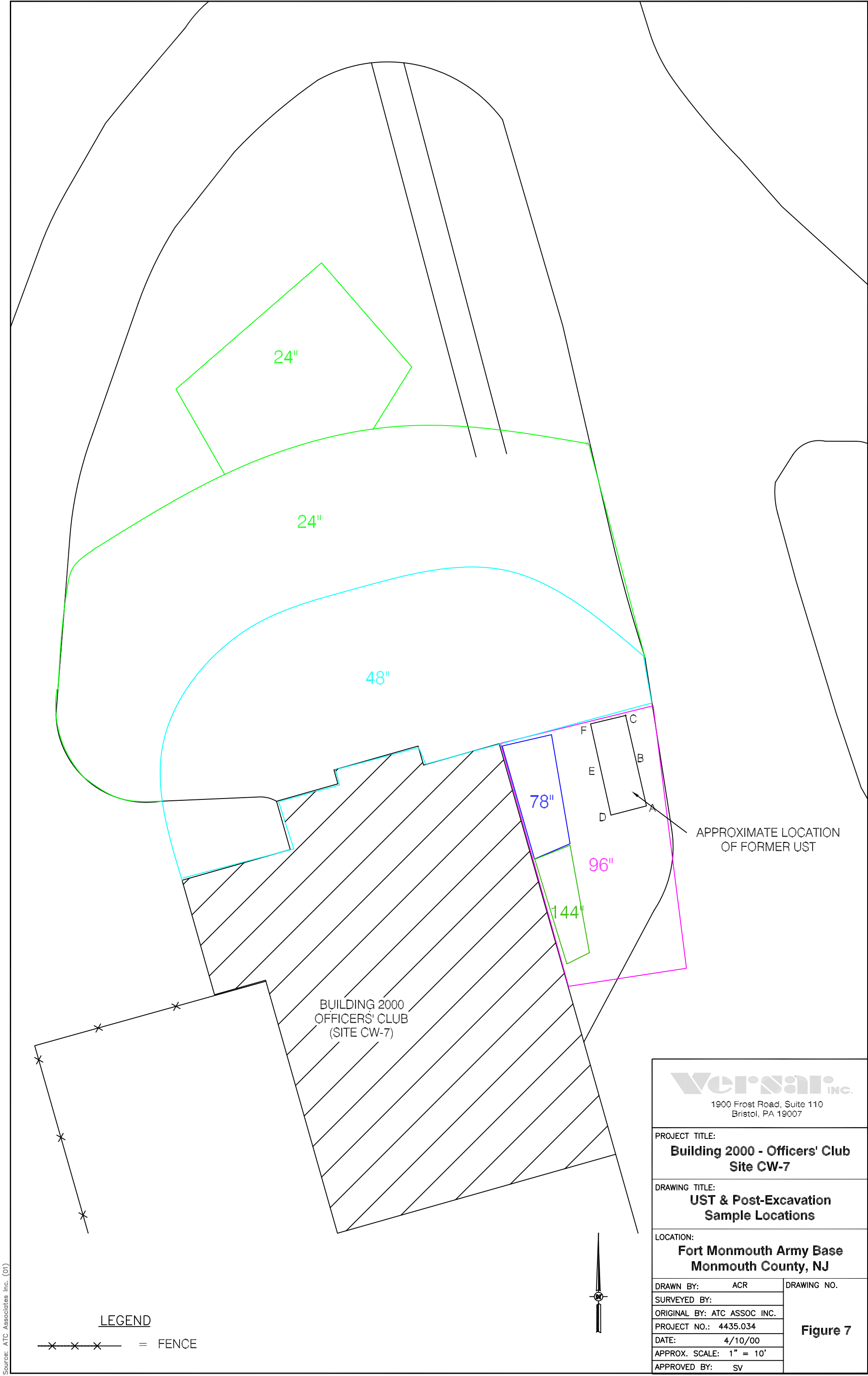
DATE: 06/23/00

DESIGNED BY: ACR

REVISED BY: CF

JOB NO.: 4435.034

DRAWING NO. FIGURE 5



Source: ATC Associates Inc. (01)



1900 Frost Road, Suite 110
Bristol, PA 19007

PROJECT TITLE:

**Building 2000 - Officers' Club
Site CW-7**

DRAWING TITLE:

**UST & Post-Excavation
Sample Locations**

LOCATION:

**Fort Monmouth Army Base
Monmouth County, NJ**

DRAWN BY:	ACR	DRAWING NO.
SURVEYED BY:		
ORIGINAL BY:	ATC ASSOC INC.	
PROJECT NO.:	4435.034	
DATE:	4/10/00	
APPROX. SCALE: 1" = 10'		
APPROVED BY: SV		

Figure 7

APPENDICES

APPENDIX A

Fort Monmouth – DPW Decision Document CW-7 (Former PCB Class Transformer CW035) Site

DECISION DOCUMENT

1. PURPOSE OF REMEDIAL ACTION

This decision document describes the remedial alternative for the CW-7 (Former PCB Class Transformer CW035) Site located in the Charles Wood area of Fort Monmouth. The selected remedial alternative was chosen in accordance with the following regulatory requirements: CERCLA as amended by SARA, the NCP, RCRA, N.J.A.C. 7:26D (Cleanup Standards for Contaminated Sites), N.J.A.C. 7:26E (Technical Requirements for Site Remediation) and AR 200-1, as applicable.

Prior to its removal, the CW035 transformer was located near the front entrance of the Officers Club (Bldg. 2000). The Officers Club is located on the same grounds as the Charles Wood golf course. As part of a post wide PCB survey, the CW035 transformer was sampled and tested for PCB content during the months of October and November, 1989. The sample result for the CW035 transformer revealed a PCB level of 223,091 parts per million. The PCB Class Transformer was removed from service on 10 September 1990 and shipped for offsite disposal on 24 September 1990. As part of the overall Site Investigation phase which was implemented in November of 1994, four surface soil samples were collected to evaluate the potential impact the transformer had on site soils. PCBs were detected above New Jersey Department of Environmental Protection (NJDEP) Direct Contact Soil Cleanup Criteria in all four samples. The sample with the highest PCB concentration was 204 times greater than the applicable standard. The NJDEP cleanup action level for PCBs in soil is 0.49 mg/kg. In May of 1996, a remedial investigation was implemented to completely delineate PCB levels both horizontally and vertically within the soil column. The remedial investigation was a combination of field screening techniques and sample collection for laboratory analysis. Field screening data and laboratory analysis has identified a 3,000 square foot area with PCB levels above NJDEP Direct Contact Soil Cleanup Criteria. Within the zone of contamination, PCBs have migrated vertically to a depth of six feet in some areas.

This decision document was developed by the Directorate of Public Works Environmental Office, Fort Monmouth. All documentation has been submitted and approved by the NJDEP.

2. SUMMARY OF SITE RISK

PCBs are a confirmed carcinogen with carcinogenic and tumorigenic data for studies involving laboratory animals. PCBs are a suspected human carcinogen. A frequently cited health warning pertaining to PCBs is to keep the contaminant away from all food stuffs. The area of contamination is located directly next to the Officers Club Dining Facility. PCBs are also known to persist in the environment for long periods of time.

The chemical makeup of PCBs make them highly resistant to natural degradation processes. It has also been documented that PCBs bioaccumulate within living organisms as the contaminant moves up the food chain.

3. SUMMARY OF REMEDIAL ALTERNATIVES

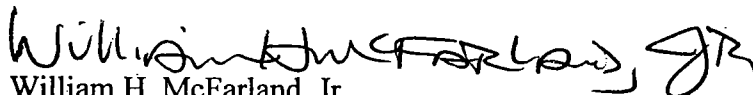
Approximately 410 cubic yards (615 tons) of contaminated soil shall be excavated and disposed of offsite. Excavation has been determined to be the most cost effective approach for eliminating the contaminant of concern at the site. The NJDEP Direct Contact Soil Cleanup Criteria for PCBs is 0.49 mg/kg. Following soil removal, the site shall be resampled and the data submitted to NJDEP. A no further action letter from the NJDEP shall be requested for the site.

4. PUBLIC/COMMUNITY INVOLVEMENT

At the present time, the Directorate of Public Works Environmental Office is working with the NJDEP and the U.S. Environmental Protection Agency Region II. Information relating to the site investigation and the planned remedial action has not been released to the general public.

5. DECLARATION

Because this remedy will not result in hazardous substances remaining on-site above levels that allow for unlimited use and unrestricted exposure, the five-year review will not apply to this action.


William H. McFarland, Jr.
LTC, MI
Garrison Commander

This Decision Document has been reviewed and approved.

Ian Curtis
Case Manager
NJDEP, Bureau of
Federal Case Management
Name, Title


Signature

7/1/97
Date

APPENDIX B

PCB Transformers Section in the Weston (1995) Site Investigation Report

4.3.11 PCB Transformers

4.3.11.1 Site Location

During the 1993 investigation (WESTON, 1993), all locations where PCB transformers had formerly been located were inspected for evidence of spills. Three sites were identified where a PCB transformer was either formerly located over soil and thus evidence of a spill could not be determined visually, or formerly located on concrete and there was discoloration in the concrete. These locations are listed in Table 3.5-1 and identified in Figure 4.3-17.

4.3.11.2 Site History

All PCB transformers (contain greater than 500 ppm PCBs) have been removed from Fort Monmouth; however, the former locations of these transformers were not previously investigated for spilled PCBs. The concrete pad outside Building 2000 was removed between the time of the 1993 investigation and the current field effort.

4.3.11.3 Sampling Effort

As discussed in Subsection 3.5, soil samples were taken from below pole-mounted transformers. Because the concrete pad near Building 2000 had been removed, four soil samples were taken downgradient of the former pad location, as indicated in Figure 4.3-18.

4.3.11.4 PCB Sampling Results

The results of the PCB transformer sampling are presented in Table 4.3-16. One of the four transformer sites sampled at the Charles Wood area was found to have PCBs in soil or concrete above NJDEP SCC.

PCBs were detected in four discrete soil samples above NJDEP SCC. The soil samples were collected downslope of the former location of transformer CW035, which was an exterior pad transformer northeast of Building 2000. This pad had been removed prior to sampling.

Table 4.3-16
Results of Transformer Site Sampling on Charles Wood

Location (Building No.)	Sample ID	Method Detection Limit (mg/kg)	Medium	NJDEP Soil Criteria (mg/kg)	Total PCBs (mg/kg)
2000	CW07-TR01	23*	Soil	0.49	100
2000	CW07-TR02	4.4*	Soil	0.49	27
2000	CW07-TR03	4.4*	Soil	0.49	26
2000	CW07-TR04	.91*	Soil	0.49	6
2018	CW07-TR05	4.5*	Soil	0.49	ND
2018	CW07-TR06	0.47	Soil	0.49	ND
2276	CWAE-TR01	0.21	Soil	0.49	ND

Compounds exceeding NJDEP cleanup criteria are noted by bold numbers

ND - Indicates that the compound was not detected at the quantification limit.

* = Method Detection Limit exceeded NJDEP criteria.



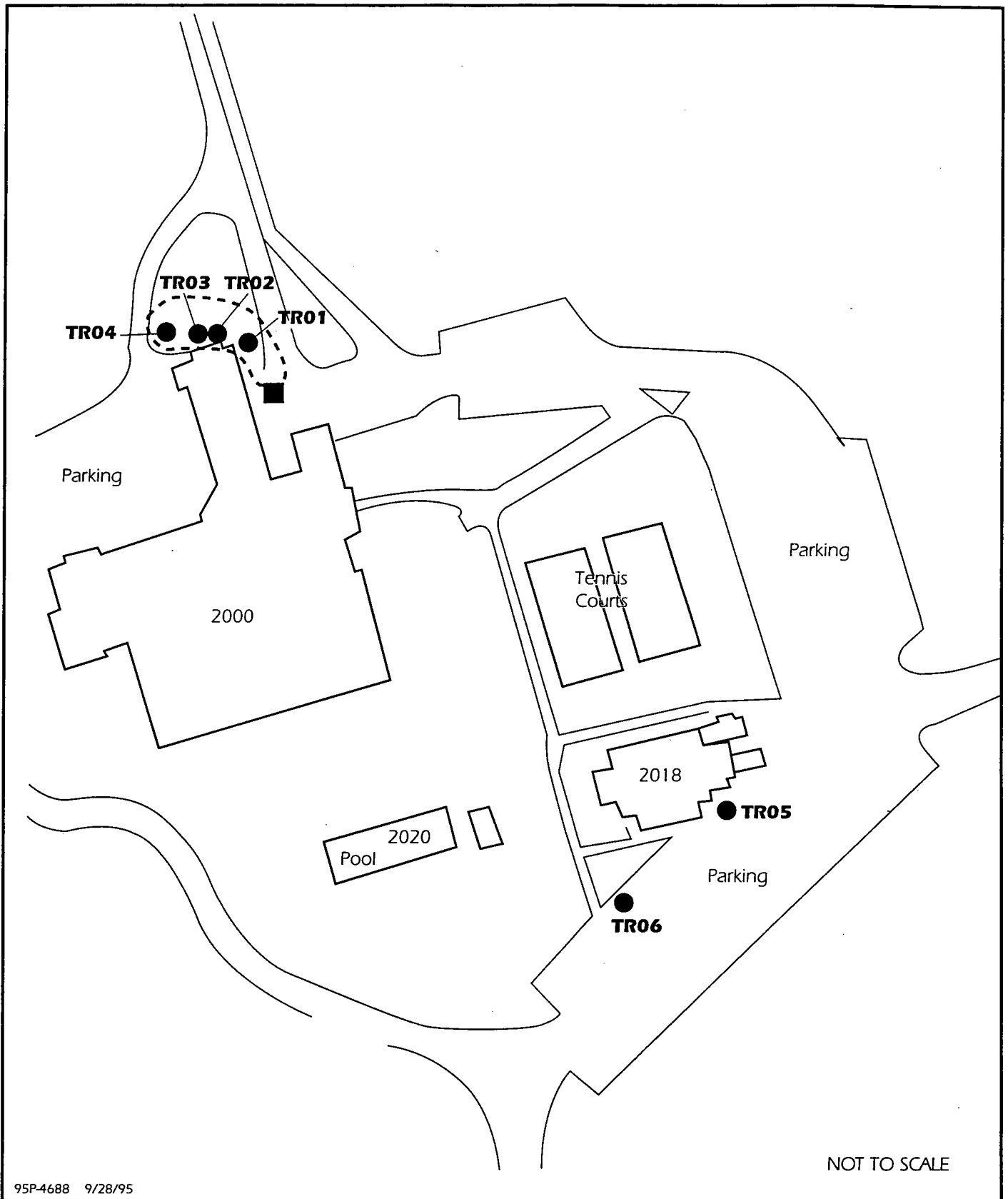
All other transformers sampled in the Charles Wood area either had results below detection limits, or had detectable levels of PCBs below applicable cleanup criteria.

4.3.11.5 Recommendations

PCBs were detected above the NJDEP criteria in each of the four soil samples collected downgradient of the former transformer location northeast of Building 2000 (transformer CW-035). PCBs were not detected above NJDEP criteria in samples collected from the other three sampling locations.

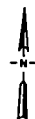
Additional samples will be taken to further delineate the extent of contamination and the contaminated soil will be removed and disposed of in accordance with applicable regulations. The depth of contamination is assumed to be 6 inches. Excavation will be performed in conjunction with confirmatory soil sampling to ensure that NJDEP SCC are achieved.





LEGEND

- Sampling Location
- Former Transformer Pad
- - - Soil Remediation Boundary



Fort Monmouth, Charles Wood

FIGURE 4.3-18
EXTENT OF REMEDIATION AT
TRANSFORMER SITE - BUILDING 2000

APPENDIX C

**ENSYS, Inc. PCB RIS[®] Soil Test System User's Guide,
Part #30966, Revision 0, 8/25/95**



ENSYS INC.
ENVIRONMENTAL PRODUCTS

PCB RISC[®] SOIL TEST SYSTEM

RAPID IMMUNOASSAY SCREEN

User's Guide

IMPORTANT NOTICE

This method correctly identifies 95% of samples that are PCB-free and those containing 1 ppm or greater of PCBs. A sample that develops less color than the standard is interpreted as positive. It contains PCBs. A sample that develops more color than the standard is interpreted as negative. It contains less than 1 ppm PCBs.

This test system should be used only under the supervision of a technically qualified individual who is capable of understanding any potential health and environmental risks of this product as identified in the product literature. The components must only be used for the analysis of soil samples for the presence of polychlorinated biphenyls. After use, the kits must be disposed of in accordance with applicable federal and local regulations.

TROUBLESHOOTER GUIDE

READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

WASH STEP

Lack of vigorous washing may result in false positives or negatives depending on whether the wash error was committed on standard or sample tubes. *Solution:* Make sure to wash four times vigorously, washing the whole set of 12 tubes at once.

PIPETTE CALIBRATION

An out-of-calibration pipette may result in false positives or negatives depending on whether the amount is greater or less than the specified transfer volume. *Solution:* Check the calibration at least daily and after any extreme mechanical shock (such as dropping). An indication that the pipette is out of calibration is if the gold barrel is loose and will turn. (When set on 30 μ l there should be about a 1/4 of an inch between the white plunger and the end of the clear pipette tip.)

AIR BUBBLES IN THE PIPETTE

The presence of air bubbles in the pipette tip when transferring extracts may result in false positives or negatives depending on whether the error was committed on standard or sample tubes. *Solution:* Quickly examine the pipette tip each time an aliquot is withdrawn and go back to the source and take another aliquot to displace the bubble if necessary.

MIXING

Lack of thorough mixing, when instructed, can cause inconsistent results. *Solution:* Observe the times in the instructions and mix with sufficient force to ensure that the liquid is homogenous.

TIMING

It is important to follow the timing steps in the instructions carefully. The incubation step in the antibody tubes can vary a bit without harm to the tests. The color development step timing is critical and should be no less than 2 minutes and no greater than 3 minutes.

WIPING THE TUBES

Wiping of the tubes should be done before they are read in the spectrophotometer because smudges and fingerprints on the tubes can give potentially false negative readings.

MIXING LOT #'S

Never mix lots! Each kit's components are matched for optimal performance and may give inaccurate results with the components from other kits with different lot #'s. Also, NEVER mix components from different types of kits (ex: Petro kit buffer can not be used with a PAH kit).

STORAGE AND OPERATING TEMPERATURES

Temperature requirements are very important and should be strictly adhered to. This test kit should be stored at less than 80°F/27°C and operated between 40°F/4°C and 90°F/32°C.

SHELF-LIFE

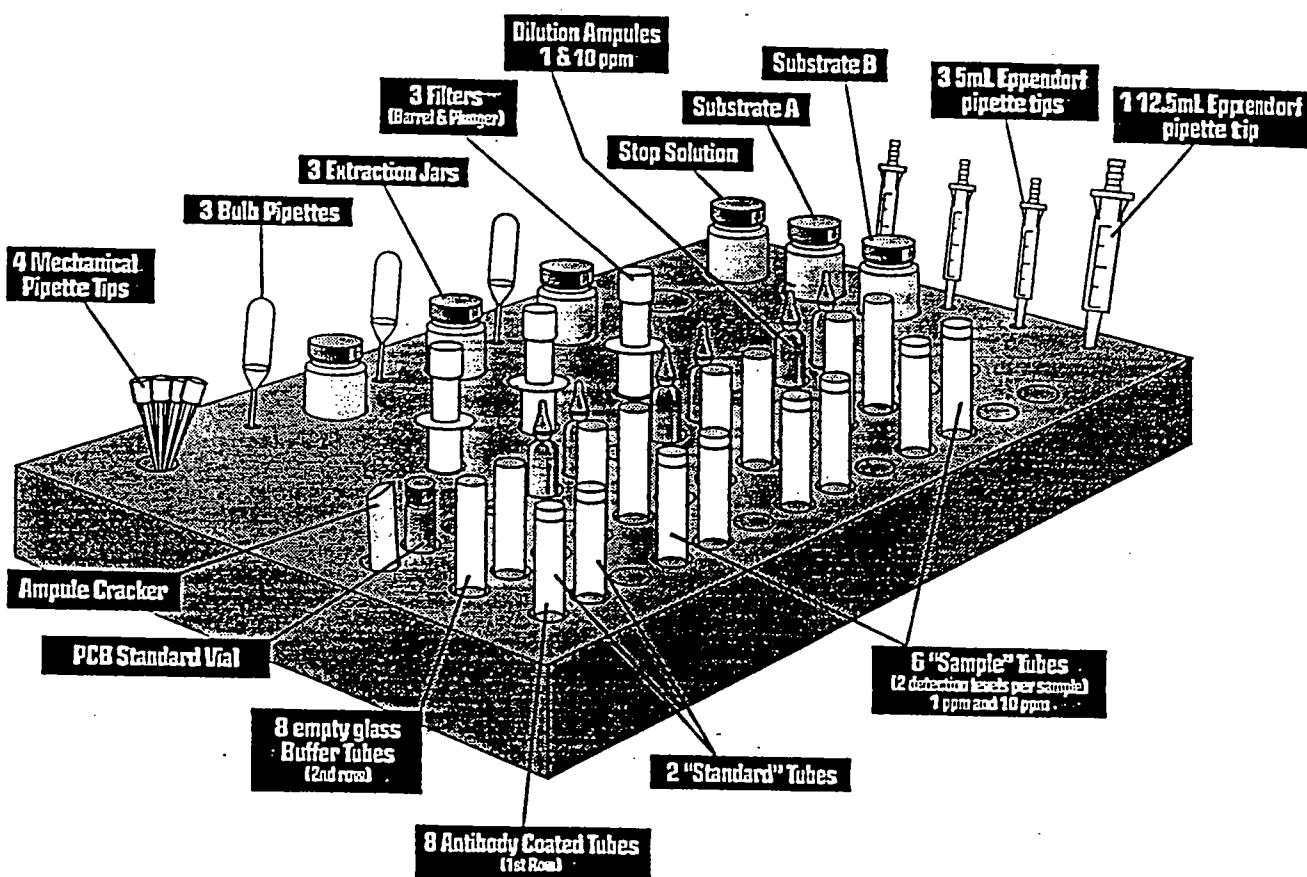
Each kit label contains the kit expiration date. To achieve accurate results, kits must be used prior to expiration.

WORKSTATION SET-UP

READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

WORKSTATION SET-UP

- Mechanical pipette tips
- Filter barrels & plungers
- Ampule cracker
- Glass PCB buffer tubes
- Substrate A
- Eppendorf pipette tips
- Bulb pipettes
- PCB standard
- Antibody coated tubes
- Substrate B
- Extraction jars
- 1 & 10 ppm dilution ampules
- Stop Solution



Workstation shows components for 3 samples tested at 2 levels

TEST PREPARATION

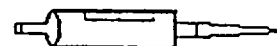
READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

READ BEFORE PROCEEDING

- Do not attempt to run more than 12 tubes, two of which must be standards.
- Items that you will need that are not provided in the test kit include: a permanent marking pen, laboratory tissue (or paper towels), a liquid waste container, and disposable gloves.
- This User's Guide was written for analyzing soil samples for PCBs at 1 and 10 ppm. See table on page 12 for sensitivity to various aroclors.

TEST PREPARATION

- Label all Eppendorf repeater tips. Tips can be reused for future analyses. Label the first 5mL tip "A", the second 5mL tip "B" and the third 5mL tip "Stop".
- Label the 12.5 mL tip "Buffer".



Eppendorf Tip

STANDARD PREPARATION

- Open PCB Standard ampules by slipping ampule cracker over top, and then breaking tip at scored neck. Transfer solution to empty vial with Bulb Pipettes.
- Label vial with current date. Standard is usable for 2 weeks. Always cap tightly when finished using standard.
- A new PCB Standard should be opened for every 4 samples.



PCB
Standard



Ampule
cracker



Bulb pipette



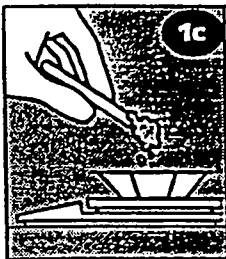
Amber
vial

PHASE 1

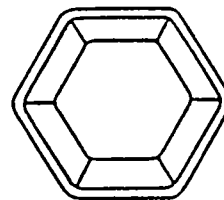
EXTRACTION & PREPARATION OF THE SAMPLE

READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

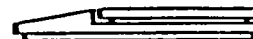
WEIGH SAMPLE



- 1a. Place unused weigh boat on pan balance.
- 1b. Press ON/MEMORY button on pan balance. Balance will beep and display 0.0.
- 1c. Weigh out 10 \pm 0.1 grams of soil.
- 1d. If balance turns off prior to completing weighing, use empty weigh boat to retare, then continue.



Weigh Boat

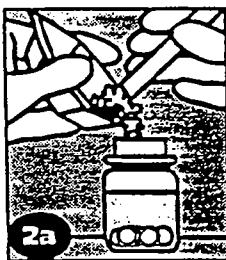


Pan balance



Wooden spatula

EXTRACT PCBs

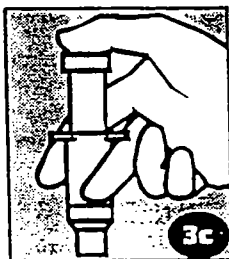


- 2a. Uncap extraction jar and place on a flat surface. Without contacting solvent puncture foil seal with ampule cracker or sharp object. Peel the remainder of the seal off extraction jar.
- 2b. Using wooden spatula, transfer 10 grams of soil from weigh boat into extraction jar.
- 2c. Recap extraction jar tightly and shake vigorously for one minute.
- 2d. Allow to settle for one minute. Repeat steps 1a - 2c for each sample to be tested.

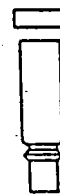


Extraction jar

FILTER SAMPLE



- 3a. Disassemble filtration plunger from filtration barrel.
- 3b. Insert bulb pipette into top (liquid) layer in extraction jar and draw up sample. Transfer at least $\frac{1}{2}$ bulb capacity into filtration barrel. Do not use more than one full bulb.
- 3c. Press plunger firmly into barrel until adequate filtered sample is available (place on table and press if necessary). Repeat steps 3a - 3c for each sample to be tested.



Filtration plunger



Filtration barrel



Bulb pipette

READ TO AVOID COSTLY MISTAKES

READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

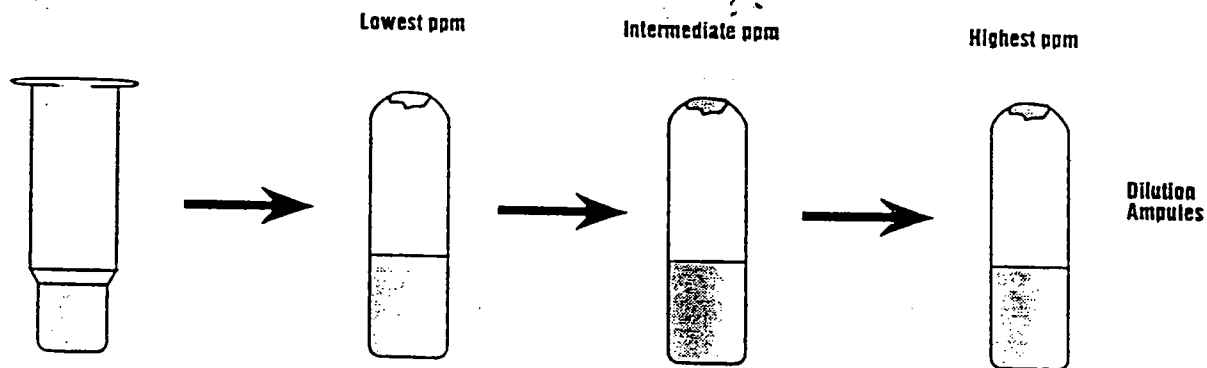
SAMPLE DILUTION PROGRAM

1. The sample dilution procedure on the next page is for standard detection levels. The following diagram represents the sample dilution procedure for all other detection levels.
2. Your kit may include extra dilution ampules to reach high detection levels.
3. **EVERY AMPULE PROVIDED MUST BE USED!**

If there are any questions concerning the dilution procedure please call Technical Services before running the samples to help avoid costly mistakes.

1-800-242-7472 or 919-941-5509 (option "4").

EXAMPLE:



NOTE: Your Kit may include additional ampules in order to achieve your test levels. Always transfer filtered sample to the dilution ampule labeled with the lowest PPM level and then transfer from this ampule to the next higher level dilution tube.

● PHASE 2

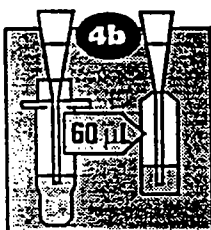
SAMPLE & STANDARD PREPARATION

READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

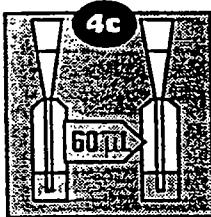
READ BEFORE PROCEEDING

- Label the plastic antibody coated tubes with a permanent marking pen.
- When using the mechanical pipette always withdraw and dispense below the liquid level.
- "Shake tubes" means to thoroughly mix the contents with special care not to spill or splash.

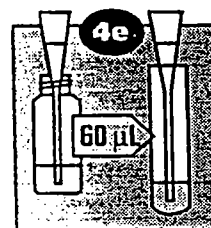
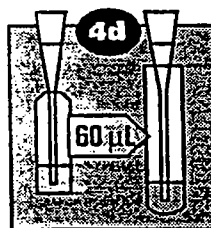
DILUTE SAMPLES AND STANDARDS



1 ppm



1 ppm 10 ppm



PCB Standard

4a. Set the Eppendorf Repeater on 4, assemble the "Buffer" tip and fill with Buffer.

4b. Dispense 1 mL of Buffer into each glass buffer tube.

4c. Open 1 and 10 ppm dilution ampules by slipping ampule cracker over top, and then breaking top at scored neck.

4d. Withdraw 60 µL of filtered sample using mechanical pipette and dispense below the liquid level in "1 ppm" dilution ampule. Gently shake ampule from side to side for 5 seconds to mix thoroughly.

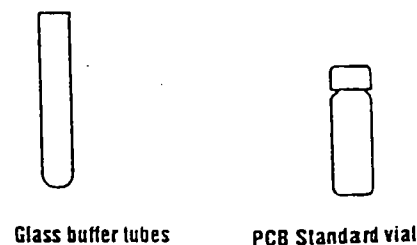
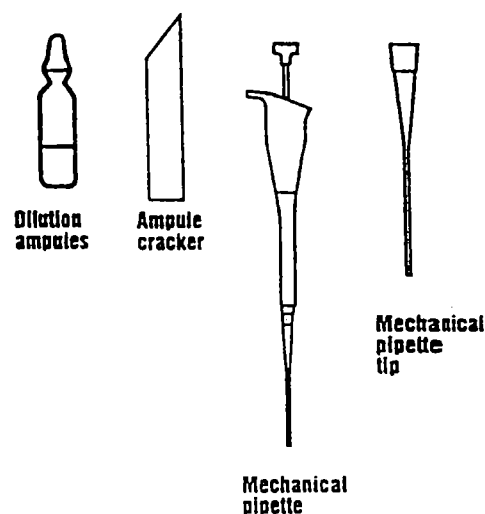
4e. Withdraw 60 µL from the "1 ppm" dilution ampule using mechanical pipette and dispense below the liquid level in "10 ppm" dilution ampule. Gently shake ampule from side to side for 5 seconds to mix thoroughly.

4f. Transfer 60 µL from each dilution ampule into glass buffer tubes. Always wipe tip after dispensing into buffer tube.

4g. Change pipette tip and repeat 4d - 4f for each sample.

4h. Assemble new pipette tip on mechanical pipette and transfer 60 µL from Standard vial into two glass buffer tubes. Immediately replace cap on PCB Standard vial.

4i. Shake all glass buffer tubes for 5 seconds.

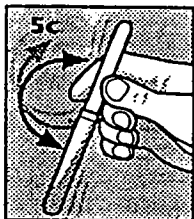
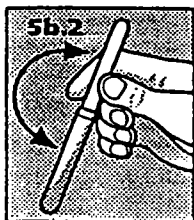
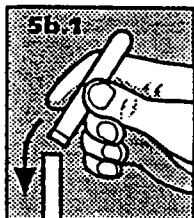


PHASE 3

THE IMMUNOASSAY

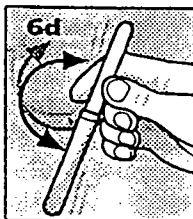
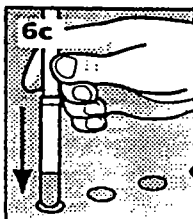
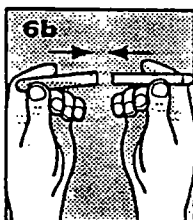
READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

TRANSFER FROM DILUTION TUBE TO ANTIBODY COATED TUBE



- 5a. Set timer for 10 minutes.
- 5b. Working left to right in the workstation:
1. Fit all antibody coated tubes firmly on top of all corresponding glass buffer tubes.
 2. Start timer and immediately invert all connected tube pairs so that the liquid is poured into the antibody coated tubes. Return the tube pairs to the appropriate workstation row making sure the larger (antibody coated) tube is on the bottom.
- 5c. Invert all tube pairs several more times making sure the pair is returned to the workstation with the larger (antibody coated) tube on the bottom.
- 5d. Disconnect and discard the smaller (dilution) tubes. It is not important to worry about drops of liquid adhering to lips of tubes.
- 5e. Place conjugate tubes behind antibody tubes in workstation. Remove grey caps and discard.

TRANSFER OF CONJUGATE TO ANTIBODY COATED TUBES



- AFTER 10 MINUTES, IMMEDIATELY:**
- 6a. Set timer for 5 minutes.
- 6b. Working left to right in the workstation:
- Start timer and immediately:**
- Dissolve the conjugate pellets by horizontally connecting the antibody coated tubes and conjugate tubes and tilt the liquid up to pour it onto the conjugate.
- 6c. Return the connected tubes to the appropriate workstation row making sure the larger (antibody coated) tube is on the bottom. It is important that this step is completed within one minute for all tubes.
- 6d. In order to adequately mix solution, invert all connected tube pairs several more times making sure that the pair is returned to the workstation with the larger (antibody coated) tube on the bottom.
- 6e. Disconnect and discard the conjugate tubes. It is not important to worry about the loss of liquid adhering to lip of tubes.

PHASE 4

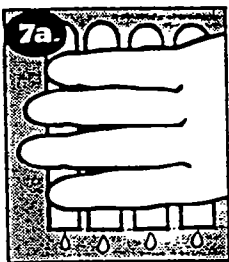
INTERPRETATION

READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

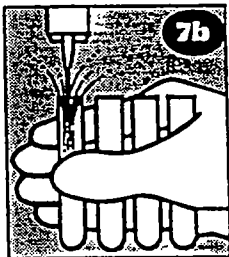
READ BEFORE PROCEEDING WASH PROCEDURE

- An accurate test requires a vigorous wash accomplished by directing a strong stream into the antibody coated tubes.
- The wash solution is a harmless, dilute solution of detergent.

WASH



7a. After the 5 minute incubation (a total of 15 minutes), empty antibody coated tubes into liquid waste container.



7b. Wash antibody coated tubes by vigorously filling and emptying a total of 4 times.

7c. Tap antibody coated tubes upside down on paper towels to remove excess liquid. Residual foam in the tubes will not interfere with test results.

Note: When running up to 12 antibody coated tubes, tubes can be washed in two groups - one group immediately following the other group.



Wash bottle

PHASE 3

THE IMMUNOASSAY

READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

COLOR DEVELOPMENT

- 8a. Set the Eppendorf Repeater on 2, assemble the "A" tip and fill with Substrate A (TMB, yellow label).
- 8b. Dispense once (200 μ L) into each antibody coated tube.
- 8c. Set timer for exactly 2 1/2 minutes.
- 8d. Assemble "B" tip, fill with Substrate B, start timer, and dispense once (200 μ L H_2O_2 , green label) into each antibody coated tube.
- 8e. Shake all tubes for 5 seconds. Solution will turn blue in some or all antibody coated tubes.
- 8f. Assemble "Stop" tip, fill with Stop Solution (red label), and stop reaction at end of 2 1/2 minutes by dispensing once (200 μ L) into each antibody coated tube.



Substrate A



Substrate B



Stop

AROCLOR SENSITIVITY

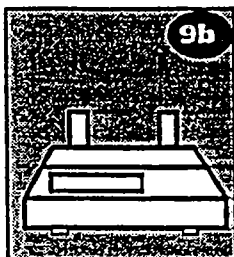
Aroclor	Lowest Detection Level
1248	1.0 ppm
1254	0.5 ppm
1260	0.5 ppm
1242	2.0 ppm
1232	4.0 ppm
1016	5.0 ppm

PHASE 4

ANALYSIS OF RESULTS

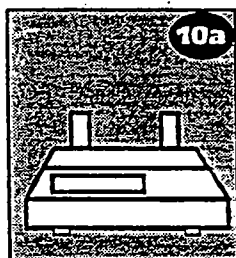
READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

SELECT STANDARD



- 9a. Wipe outside of all antibody coated tubes.
- 9b. Place both Standard tubes in photometer.
- 9c. Switch tubes until the photometer reading is negative or zero. Record reading.
If reading is greater than - 0.3 in magnitude, results are outside QC limits. Retest the sample(s).
- 9d. Remove and discard tube in right well. The tube in the left well is the darker standard.

MEASURE SAMPLE



- 10a. Place 1 ppm tube in right well of photometer and record reading.
If photometer reading is negative or zero, PCBs are present.
If photometer reading is positive, concentration of PCBs is less than 1 ppm.
- 10b. Place 10 ppm tube in right well of photometer and record reading.
If photometer reading is negative or zero, PCBs are present.
If photometer reading is positive, concentration of PCBs is less than 10 ppm.

QUALITY CONTROL

READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

System Description

Each PCB RISC Soil 12 Test Case contains enough material to perform 12 test samples, each at two detection levels.

The PCB RISC Soil Test is divided into four phases. The instructions and notes should be reviewed before proceeding with each phase.

Hotline Assistance

If you need assistance or are missing necessary Test System materials, call toll free: 1-800-242-RISC (7472).

Validation and Warranty Information

Product claims are based on validation studies carried out under controlled conditions. Data has been collected in accordance with valid statistical methods and the product has undergone quality control tests of each manufactured lot.

PCB-free soil and soil containing 1 ppm or greater of PCBs were tested with the EnSys PCB RISC analytical method. The method correctly identified 95% of these samples. A sample that has developed less color than the standard is interpreted as positive. It contains PCBs. A sample that has developed more color than the standard is interpreted as negative. It contains less than 1 ppm PCBs.

The company does not guarantee that the results with the PCB RISC Soil 24 Test Case will always agree with instrument-based analytical laboratory methods. All analytical methods, both field and laboratory, need to be subject to the appropriate quality control procedures.

EnSys, Inc. warrants that this product conforms to the descriptions contained herein. No other warranties, whether expressed or implied, including warranties of merchantability and of fitness for a particular purpose shall apply to this product.

EnSys, Inc. neither assumes nor authorizes any representative or other person to assume for it any obligation or liability other than such as is expressly set forth herein.

Under no circumstances shall EnSys, Inc. be liable for incidental or consequential damages resulting from the use or handling of this product.

How It Works

Standards, Samples, and color-change reagents are added to test tubes, coated with a chemical specific to PCBs. The concentration of PCBs in an unknown Sample is determined by comparing its color intensity with that of a Standard.

Note: PCB concentration is inversely proportional to color intensity; the lighter the color development of the sample, the higher the concentration of PCBs.

Quality Control

Standard precautions for maintaining quality control:

- Do not use reagents or test tubes from one Test System with reagents or test tubes from another Test System.
- Do not use the Test System after any portion has passed its expiration date.
- Do not attempt the test using more than 12 antibody coated tubes (two of which are Standards) at the same time.
- Do not exceed incubation periods prescribed by the specific steps.
- Always follow the procedure in this user's guide.
- Use EPA Method 8080 or Code of Federal Regulations Title 40, Part 136, Appendix A, Method 680 to confirm results.

Storage and Handling Precautions

- Wear protective gloves and eyewear.
- Store kit at room temperature and out of direct sunlight (less than 80°F).
- Keep aluminized pouch (containing unused antibody coated tubes) sealed when not in use.
- If Stop Solution or liquid from the extraction jar comes into contact with eyes, wash thoroughly with cold water and seek immediate medical attention.
- Standard Solution contains PCBs. Test samples may contain PCBs. Handle with care.

EPPENDORF REPEATER & MECHANICAL PIPETTE

READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH THE TEST

HOW TO OPERATE THE EPPENDORF REPEATER

To Set Or Adjust Volume

To determine the pipetting volume, the dial setting (1-5) is multiplied by the minimum pipetting volume of the tip.

To Assemble Pipette Tip

Slide filling lever down until it stops. Then raise the locking clamp and insert the tip until it clicks into position. Be sure the tip plunger is fully inserted into the barrel before lowering the locking clamp to affix the tip in place.

To Fill Tip

With tip mounted in position on pipette, immerse end of tip into solution. Slide filling lever upward slowly.

To Dispense Sample

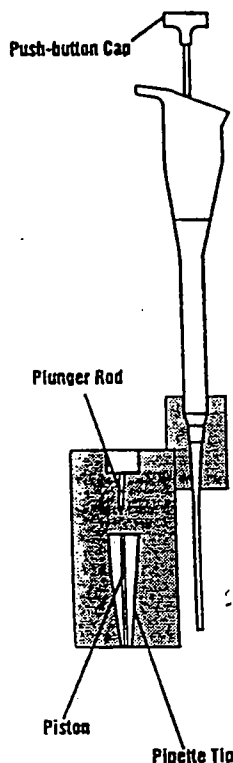
Check the volume selection dial to ensure pipetting volume. Place tip inside test tube so that tip touches the inner wall of tube. Completely depress the pipetting lever.

To Eject Tip

Empty tip of any remaining solution into appropriate container. Raise locking clamp upward, and remove the tip.

For additional information regarding operation and use of repeater, please refer to your Eppendorf Repeater manual.

Mechanical Pipette



HOW TO OPERATE THE MECHANICAL PIPETTE

To Set Or Adjust Volume

Remove push-button cap and use it to loosen volume lock screw. Turn lower part of push-button to adjust volume up or down. Meter should read "060". Tighten volume lock screw and replace push-button cap.

To Assemble Pipette Tip

Slide larger mounting end of pipette tip onto end of pipette. Holding tip in place, press push-button until plunger rod enters pipette tip. Ensure no gap exists between piston and plunger rod.

To Withdraw Sample

With tip mounted in position on pipette, press push-button to first stop and hold it. Place tip at bottom of liquid sample and slowly release push-button to withdraw measured sample. Ensure that no bubbles exist in liquid portion of sample. If bubbles exist, dispense sample and re-withdraw sample.

To Dispense Sample

Place tip into dispensing vessel (immersing end of the tip if vessel contains liquid) and slowly press push-button to first stop. (Do not push to second stop or tip will eject).

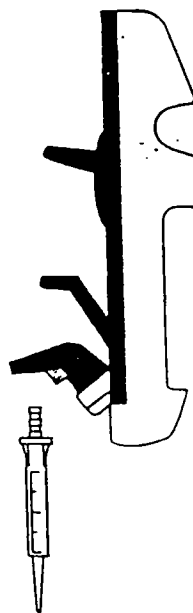
Remove tip from vessel and release push-button.

To Eject Tip

Press push-button to second stop. Tip is ejected.

For additional information regarding operation and use of pipette, please refer to your pipette manual.

Eppendorf Repeater



APPENDIX D

PCB RIS[®] Soil Test Field Screening Data, May – June 1996

Operator: <u>R. Sarno</u>		Date: <u>5/28/96</u>		Location: <u>FT. Monmouth Bx 2000</u>	
Sample ID	ΔOD Standards	OD sample	Interpretation	OD sample	Interpretation
		<u>0.5</u> ppm		<u>50</u> ppm	
1-1 TR51-A01	-0.04	-0.62	> 0.5	-0.56	> 50
1-2 TR52-A01	↓	-0.60	> 0.5	-0.12	> 50
1-3 TR53-A01	↓	-0.60	> 0.5	-0.26	> 50
1-4 TR61-A01	↓	-0.60	> 0.5	-0.45	> 50
2-1 TR62-A01	-0.02	-0.51	> 0.5	-0.44	> 50
2-2 TR63-A01	↓	-0.52	> 0.5	0.20	< 50
2-3 TR64-A01	↓	-0.53	> 0.5	0.27	< 50
2-4 TR65-A01	↓	-0.53	> 0.5	0.31	< 50
3-1 TR66-A01	-0.13	-0.39	> 0.5	0.17	< 50
3-2 TR71-A01	↓	-0.42	> 0.5	0.12	< 50
3-3 TR72-A01	↓	-0.39	> 0.5	-0.02	> 50
3-4 TR73-A01	↓	-0.41	> 0.5	0.02	< 50

1200

Part # 30965 Rev. 6

[illegible]

Data for PCB RISC® Soil Test

Operator:		Date: 5/29/96		Location: FT. Rucker, R.D. 2000	
Sample ID	ΔOD	OD sample	Interpretation	OD sample	Interpretation
	Standards	0.5 ppm		50 ppm	
1-1 TR32-A01	-0.05	-0.29	> 0.5	0.39	< 50
1-2 TR33-A01	↓	0.26	< 0.5	0.39	< 50
1-3 TR34-A01	↓	0.31	< 0.5	0.50	< 50
1-4 TR35-A01	↓	0.28	< 0.5	0.36	< 50
2-1 TR22-A01	-0.04	-0.04	> 0.5	0.57	< 50
2-2 TR42-A01	↓	-0.38	> 0.5	0.46	< 50
2-3 TR43-A01	↓	0.30	< 0.5	0.42	< 50
2-4 TR44-A01	↓	0.28	< 0.5	0.47	< 50
3-1 TR05-A02	-0.13	0.34	< 0.5	0.42	< 50
3-2 TR32-A02	↓	0.16	< 0.5	0.29	< 50
3-3 TR53-A02	↓	-0.52	> 0.5	0.35	< 50
3-4 TR75-A02	↓	-0.46	> 0.5	0.41	< 50

[illegible]

Data for PCB RISC® Soil Test

Operator: <u>R. Semko</u>		Date: <u>5/30/96</u>		Location: <u>FT. Monmouth Bldg 2000</u>	
Sample ID	ΔOD	OD sample	Interpretation	OD sample	Interpretation
	Standards	<u>0.5</u> ppm		<u>50</u> ppm	
1-1 TR07-A01	-0.01	0.45	< 0.5	0.68	< 50
1-2 TR12-A02		0.01	< 0.5	0.55	< 50
1-3 TR53-A03		-0.57	> 0.5	0.43	< 50
1-4 TR75-A03		0.11	< 0.5	0.56	< 50
1-5 TR24-A01 (RE)	↓	-0.56	> 0.5	0.43	< 50
2-1 TR15-A01	-0.05	0.41	< 0.5	0.46	< 50
2-2 TR24-A02		0.04	< 0.5	0.38	< 50
2-3 TR25-A01		0.36	< 0.5	0.39	< 50
2-4 TR53-A01	↓	0.85	> 0.5	0.33	< 50
3-1 TR02-A02	-0.04	0.61	< 0.5	0.59	< 50
3-2 TR04-A02		-1.08	> 0.5	0.60	< 50
3-3 TR22-A03	↓	-0.83	> 0.5	0.52	< 50

Data for PCB RISC® Soil Test

Operator:		Date: <u>5/30/14</u>		Location: <u>Exd. Monmouth</u>		
Sample ID	ΔOD Standards	OD sample	Interpretation	OD sample	Interpretation	Comments
		<u>0.5</u> ppm		<u>50</u> ppm		
TR51-A02	-0.18	-1.02	>0.5	-0.26	>50	
TR51-A03	↓	0.97	>0.5	0.64	<50	
TR61-A02	↓	-1.02	>0.5	0.26	<50	
TR61-A03	↓	-1.01	>0.5	0.35	<50	
TR72-A02	↓	-1.00	>0.5	0.33	<50	
TR04-A03	-0.19	-1.00	>0.5	0.46	<50	
TR03-A03	↓	-0.80	>0.5	0.48	<50	
TR81-A02	↓	0.20	<0.5	0.48	<50	
TR82-A02	↓	-0.76	>0.5	0.54	<50	

4-1
4-2
4-3
4-4
4-5
5-2
5-3
5-4

Data for PCB RISC® Soil Test

Operator:		Date: <u>5/30/94</u>		Location: <u>Fort. Monmouth, Bldg. 2055</u>	
Sample ID	ΔOD	OD sample	Interpretation	OD sample	Interpretation
	Standards	<u>0.5</u> ppm		<u>50</u> ppm	
6-1 TR51-A04	-0.24	-0.98	> 0.5	0.40	< 50
6-2 TR61-A04	↓	-0.97	> 0.5	0.01	< 50
6-3 TR64-A03	↓	-0.87	> 0.5	0.37	< 50
6-4 TR66-A02	↓	-0.40	> 0.5	0.45	< 50
7-1 TR04-A04	-0.07	-0.71	> 0.5	0.62	< 50
7-2 TR82-A03	↓	-0.18	> 0.5	0.59	< 50
7-3 TR83-A02	↓	0.29	< 0.5	0.52	< 50
8-1 TR61-A05	-0.03	-0.57	> 0.5	0.51	< 50
8-2 TR66-A03	↓	0.14	< 0.5	0.51	< 50
8-3 TR73-A03	↓	-0.50	> 0.5	0.54	< 50
✓					

Operator:	Date:	Location:
TR 14 - A01 (R)	< 0.5	< 50
TR 53 - A04 (R)	> 0.5	< 50
TR 61 - A02 (R)	> 0.5	> 50
TR 72 - A01 (R)	> 0.5	< 50
TR 83 - A02 (R)	< 0.5	< 50

APPENDIX E

**Analytical Laboratory Data – PCB Confirmation
WESTON Environmental Metrics, Inc. (Gulf Coast), June 1996**

Weston Environmental Metrics, Inc. (Gulf Coast)
PCBs by GC

Report Date: 06/16/96 09:20

RFW Batch Number: 9606G503

Client: USACE-Ft. Monmouth

Work Order: 03886-076-037-0

Page: 1

Sample Information	Cust ID:	CW07-TR04-AO	CW07-TR12-AO	CW07-TR13-AO	CW07-TR32-AO	CW07-TR33-AO	CW07-TR53-AO
		4	2	1	2	1	5
	RFW#:	001	002	003	004	005	006
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	5.0	5.0	50	5.0	10	5.0
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate:	Tetrachloro-m-xylene	115 %	110 %	D %	105 %	95 %	100 %
	Decachlorobiphenyl	135 %	170 * %	D %	130 %	140 %	120 %
		=====f	=====f	=====f	=====f	=====f	=====f
Aroclor-1016		440 U	430 U	4200 U	460 U	910 U	480 U
Aroclor-1221		440 U	430 U	4200 U	460 U	910 U	480 U
Aroclor-1232		440 U	430 U	4200 U	460 U	910 U	480 U
Aroclor-1242		440 U	430 U	4200 U	460 U	910 U	480 U
Aroclor-1248		440 U	430 U	4200 U	460 U	910 U	480 U
Aroclor-1254		890 U	860 U	8400 U	910 U	1800 U	970 U
Aroclor-1260		1600	520	8400 U	320	460	1600

Sample Information	Cust ID:	CW07-TR61-AO	CW07-TR61-AO	CW07-TR61-AO	CW07-TR61-AO	PBLKNY	PBLKNY BS
		1	1	1	5	96GP0563-MB1	96GP0563-MB1
	RFW#:	007	007 MS	007 MSD	008	SOIL	SOIL
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	250	250	250	50	0.50	0.50
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate:	Tetrachloro-m-xylene	D %	D %	D %	D %	85 %	90 %
	Decachlorobiphenyl	D %	D %	D %	D %	105 %	110 %
		=====f	=====f	=====f	=====f	=====f	=====f
Aroclor-1016		22000 U	22000 U	22000 U	4500 U	40 U	40 U
Aroclor-1221		22000 U	22000 U	22000 U	4500 U	40 U	40 U
Aroclor-1232		22000 U	22000 U	22000 U	4500 U	40 U	40 U
Aroclor-1242		22000 U	22000 U	22000 U	4500 U	40 U	40 U
Aroclor-1248		22000 U	22000 U	22000 U	4500 U	40 U	40 U
Aroclor-1254		44000 U	D %	D %	9000 U	80 U	105 %
Aroclor-1260		72000	97000	88000	6800	80 U	80 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

Weston Environmental Metrics, Inc. (Gulf Coast)

PCBs by GC

Report Date: 06/16/96 09:20

RFW Batch Number: 9606G503

Client: USACE-Ft. Monmouth

Work Order: 03886-076-037-0

Page: 2

18

Cust ID: PBLKNY BSD

Sample
Information

RFW#: 96GP0563-MB1
Matrix: SOIL
D.F.: 0.50
Units: ug/Kg

Surrogate:	Tetrachloro-m-xylene	85	%
	Decachlorobiphenyl	110	%
=====f =====f =====f =====f =====f =====f =====			
Aroclor-1016		40	U
Aroclor-1221		40	U
Aroclor-1232		40	U
Aroclor-1242		40	U
Aroclor-1248		40	U
Aroclor-1254		97	%
Aroclor-1260		80	U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

APPENDIX F

**Backfill Material Receipts – Sand and Stone
John Guire Co., Long Branch, NJ – November 1997**

125197 532-1678

JOHN GUIRE CO.

13698

Date

Cust. Phone

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

Driver On _____ Off _____

Owner's Name

TECOM - VINNELL

Address

OFFICER'S CLUB

Supplies

Product

BANK RUN FILL

Price
Per Ton

5.83/yd

Price

104.94

DATE

TIME

18:10 S

Gross lb.

Tare lb.

Net lb.

Tax

Sub Total

Del. Chg.

TOTAL

104.94

Special Instructions

P.O. R 97-01798

Delivered prices are for street curb delivery, except where the curb and sidewalk are entirely bridged
protected and a suitable road provided to actual point of unloading inside of curb. We will assume no
liability for any damages where delivery is made inside of curb.

Rec'd By

Chp Deegan

Weigher

Other Products
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden St
- Mulch
- Top Soil & Fill
- Wall Stone
- Cobble Stone
- Railroad Ties

BILLING C

BILLING CO

- Railroad Tie
- Cobble Stone
- Wall Stone
- Top Soil & Fill
- Mulch
- Lawn & Garden S
- Hardware
- Fuel Oil
- Other Products

Weight

Rec'd By

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb. We will assume no liability for any damages where delivery is made inside of curb.

TOTAL

Del. Chg.

Sub Total

Tax

Price

Net lb.
Tare lb.
Gross lb.

P.O. 297-0198

DATE
TIME

184ds

Price
Per Ton

Bank Run Fill

TECOM - VINNET
OFFICERS CLUB
FT. MONMOUTH

Customer's Name

Date

Cust. Phone

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

JOHN GUIRE CO.

JOHN GUIRE CO.

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

532-1678

Date

Cust. Phone

Customer's Name

TECOM - VINNET
OFFICERS CLUB
FT. MONMOUTH

ct

Bank Run Fill

Price
Per Ton

583/4d

DATE

TIME

184ds

Gross lb.
Tare lb.
Net lb.

Price

Tax

Sub Total

Del. Chg.

TOTAL

104 94

Driver On

Off

Supplies

Other Products
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supp
- Mulch
- Top Soil & Fill Dir
- Wall Stone
- Cobble Stone
- Railroad Ties

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb. We will assume no liability for any damages where delivery is made inside of curb.

Rec'd By

Weight

Cap Dayton

BILLING CO

532-1678

Date

Cust. Phone

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

JOHN GUIRE CO.

Customer's Name

TECOM - VINNET
OFFICERS CLUB

Bank Run Fill

Price
Per Ton

583/4d

DATE

TIME

184ds

Gross lb.
Tare lb.
Net lb.

Price

Tax

Sub Total

Del. Chg.

104 94

Driver On

Off

Supplies

Other Products
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Suppl
- Mulch
- Top Soil & Fill Dirt

at Bank Run Fill Price Per Ton 583/40

DATE

TIME

1840s

Gross lb.

Tare lb.

Net lb.

Price

Tax

Sub Total

Del. Chg.

TOTAL

Other Product
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Sup
- Mulch
- Top Soil & Fill D
- Wall Stone
- Cobble Stone
- Railroad Ties

clerk's actions

P.O. R 97-0198

delivered prices are for street curb delivery, except where the curb and sidewalk are entirely bridged
ected and a suitable road provided to actual point of unloading inside of curb. We will assume no
ibility for any damages where delivery is made inside of curb.

Rec'd By

Weigher

BILLING CO

25197 532-1678

JOHN GUIRE CO.

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

13691

Driver On

Off

Supplies

Date Cust. Phone

er's Name

TECOM - VINNET
OFFICERS CLUB
FT Monmouth

Bank Run Fill

Price
Per Ton

583/40

DATE

TIME

1840s

Gross lb.

Tare lb.

Net lb.

Price

Tax

Sub Total

Del. Chg.

TOTAL

Other Products
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supp
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

clerk's actions

P.O. R 97-0198

delivered prices are for street curb delivery, except where the curb and sidewalk are entirely bridged
ted and a suitable road provided to actual point of unloading inside of curb. We will assume no
ility for any damages where delivery is made inside of curb.

Rec'd By

Weigher

BILLING CO

11.97 P.O. R 97-0198

JOHN GUIRE CO.

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

13674

Driver On

Off

Supplies

te Cust. Phone

s Name

TECOM - VINNET
OFFICERS CLUB
FT Monmouth

Bank Run Fill

Price
Per Ton

583/40

DATE

TIME

1840s

Gross lb.

Tare lb.

Net lb.

Price

Tax

Sub Total

Del. Chg.

TOTAL

Other Products
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supplier
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

clerk's actions

delivered prices are for street curb delivery, except where the curb and sidewalk are entirely bridged
and a suitable road provided to actual point of unloading inside of curb. We will assume no
for any damages where delivery is made inside of curb.

Rec'd By

Weigher

BILLING CO

3rd Run Fill

Price
Per Ton

5 83/yd

Price

104 94

DATE

TIME

18
yd

Gross lb.

Tare lb.

Net lb.

Tax

Sub Total

Del. Chg.

TOTAL

104 94

Other Products
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supply
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

Actions

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb. We will assume no liability for any damages where delivery is made inside of curb.

Rec'd By

Chp Deaton

Weigher

BILLING CO

7/21/97

PO R-97-01798

JOHN GUIRE CO.

13672

Date

Cust. Phone

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

Driver On

Off

Driver's Name

TECOM - VINNEN
OFFICERS CLUB

Supplies

FT. Monmouth

3rd Run Fill

Price
Per Ton

5 83/yd

Price

104 94

Tax

Sub Total

Del. Chg.

TOTAL

104 94

Other Products
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supply
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE

TIME

18
yd

Gross lb.

Tare lb.

Net lb.

Del. Chg.

TOTAL

104 94

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb. We will assume no liability for any damages where delivery is made inside of curb.

Rec'd By

Chp Deaton

Weigher

BILLING CO

7/21/97

PO R-97-01798

JOHN GUIRE CO.

13676

Date

Cust. Phone

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

Driver On

Off

Driver's Name

TECOM - VINNEN
OFFICERS CLUB

Supplies

FT. Monmouth

3rd Run Fill

Price
Per Ton

5 83/yd

Price

104 94

Tax

Sub Total

Del. Chg.

TOTAL

104 94

Other Products
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supply
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE

TIME

18
yd

Gross lb.

Tare lb.

Net lb.

Del. Chg.

TOTAL

104 94

Actions

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb. We will assume no liability for any damages where delivery is made inside of curb.

Rec'd By

Chp Deaton

Weigher

BILLING CO

3rd Fill

Price
Per Ton

583/yd

Price

104.94

**Other Products
Always Available**

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE

TIME

18
yard

Gross lb.

Tare lb.

Net lb.

Tax

Sub Total

Del. Chg.

TOTAL

104.94

Actions

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged
and a suitable road provided to actual point of unloading inside of curb. We will assume no
any damages where delivery is made inside of curb.

Rec'd By

Weigher

BILLING COPY

97

PO. # 97-01793

JOHN GUIRE CO.

13889

Cust. Phone

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

Driver On

Off

Name

TECOM - VIMBELL

Supplies

OFFICERS CLUB

FT. MON

Fill

Price
Per Ton

583 yard

Price

104.94

**Other Products
Always Available**

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE

TIME

-1-
TARDEN
18
yard

Gross lb.

Tare lb.

Net lb.

Tax

Sub Total

Del. Chg.

TOTAL

104.94

Actions

JOE ROGERS

532-1678

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged
and a suitable road provided to actual point of unloading inside of curb. We will assume no
any damages where delivery is made inside of curb.

Rec'd By

Weigher

BILLING COPY

97

PO. # 97-01798

JOHN GUIRE CO.

13888

Cust. Phone

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

Driver On

Off

Name

TECOM - VIMBELL

Supplies

OFFICERS CLUB

FT. MON

Fill

Price
Per Ton

583 yard

Price

104.94

**Other Products
Always Available**

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE

TIME

-1-
TARDEN
18
yard

Gross lb.

Tare lb.

Net lb.

Tax

Sub Total

Del. Chg.

TOTAL

104.94

Actions

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged
and a suitable road provided to actual point of unloading inside of curb. We will assume no
any damages where delivery is made inside of curb.

Rec'd By

Weigher

BILLING COPY

Fill

Price
Per Ton

5.83 yd

Price 104.94

Other Products
Always Available

DATE

TIME

18
YARD

Gross lb.

Tare lb.

Net lb.

Tax

Sub Total

Del. Chg.

TOTAL

104.94

- Fuel Oil
- Hardware
- Lawn & Garden Sup
- Mulch
- Top Soil & Fill Dir
- Wall Stone
- Cobble Stone
- Railroad Ties

Actions

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged
and a suitable road provided to actual point of unloading inside of curb. We will assume no
liability for any damages where delivery is made inside of curb.

Rec'd By

Weigher

BILLING CO

17-97

PO # R9701798

JOHN GUIRE CO.

13886

Date

Cust. Phone

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

Driver On

Off

Owner's Name

TECUM - VIMMER

Supplies

OFFICERS CLUB

FT. MON.

Fill

Price
Per Ton

5.83 yd

Price

104.94

Other Product
Always Available

DATE

TIME

1-
THURSDAY
18
YARD

Gross lb.

Tare lb.

Net lb.

Tax

Sub Total

Del. Chg.

TOTAL

104.94

- Fuel Oil
- Hardware
- Lawn & Garden Sup
- Mulch
- Top Soil & Fill D
- Wall Stone
- Cobble Stone
- Railroad Ties

Actions

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged
and a suitable road provided to actual point of unloading inside of curb. We will assume no
liability for any damages where delivery is made inside of curb.

Rec'd By

Weigher

BILLING CO

17-97

PO # R.97-01798

JOHN GUIRE CO.

13887

Date

Cust. Phone

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

Driver On

Off

Owner's Name

TECUM - VIMMER

Supplies

OFFICERS CLUB

FT. MON.

Fill

Price
Per Ton

5.83 yd

Price

104.94

Other Product
Always Available

DATE

TIME

1-
THURSDAY
18
YARD

Gross lb.

Tare lb.

Net lb.

Tax

Sub Total

Del. Chg.

TOTAL

104.94

- Fuel Oil
- Hardware
- Lawn & Garden Sup
- Mulch
- Top Soil & Fill D
- Wall Stone
- Cobble Stone
- Railroad Ties

Actions

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged
and a suitable road provided to actual point of unloading inside of curb. We will assume no
liability for any damages where delivery is made inside of curb.

Rec'd By

Weigher

BILLING CO

ct 1-123 Price Per Ton 5.83 Yards

Price 104.94

Other Products Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE TIME

18 Yards

Gross lb.
Tare lb.
Net lb.

Tax
Sub Total
Del. Chg.
TOTAL 104.94

delivered prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb. We will assume no liability for any damages where delivery is made inside of curb.

Rec'd By Chip Day
Weigher

BILLING C

11-14-97 R-97-01798
Date Cust. PPhone

JOHN GUIRE CO.
187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

13875

Driver On Off
Supplies

Customer's Name TECOM - VIMMELL
OFFICERS CLUB
FT. MON.
ct FILL Price Per Ton 5.83 Yards

Price 104.94

Other Products Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE TIME

18 Yards

Gross lb.
Tare lb.
Net lb.

Tax
Sub Total
Del. Chg.
TOTAL 104.94

delivered prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb. We will assume no liability for any damages where delivery is made inside of curb.

Rec'd By Chip Day
Weigher

BILLING C

11-14-97 R-97-01798
Date Cust. PPhone

JOHN GUIRE CO.
187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

13872

Driver On Off
Supplies

Customer's Name TECOM - VIMMELL
OFFICERS CLUB
FT. MON.
ct FILL Price Per Ton 5.83 Yards

Price 104.94

Other Products Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE TIME

18 Yards

Gross lb.
Tare lb.
Net lb.

Tax
Sub Total
Del. Chg.
TOTAL 104.94

delivered prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb. We will assume no liability for any damages where delivery is made inside of curb.

Rec'd By Chip Day
Weigher

BILLING C

F.I.I

Price
Per Ton

5.83 ym

Price

104.94

Other Products
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE

TIME

18
yards

Gross lb.
Tare lb.
Net lb.

Tax

Sub Total

Del. Chg.

TOTAL

104.94

Actions

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb. We will assume no liability for any damages where delivery is made inside of curb.

Rec'd By

Chip DeGisi

Weigher

BILLING COPY

14.97

12-97-01798

JOHN GUIRE CO.

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

13868

Driver On

Off

Supplies

ate

Cust. PPhone

Name

TECOM - VIMMILL STATION
OFFICERS CLUB
FT. MONMOUTH

F.I.I

Price
Per Ton

5.83 ym

Price

104.94

Other Products
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE

TIME

18
yards

Gross lb.
Tare lb.
Net lb.

Tax

Sub Total

Del. Chg.

TOTAL

104.94

Actions

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb. We will assume no liability for any damages where delivery is made inside of curb.

Rec'd By

Chip DeGisi

Weigher

BILLING COPY

13.97

12-97-01798

JOHN GUIRE CO.

187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

13848

Driver On

Off

Supplies

ate

Cust. PPhone

Name

TECOM - VIMMILL
FT. MONMOUTH
OFFICERS CLUB

F.I.I

Price
Per Ton

5.83 ym

Price

104.94

Other Products
Always Available

- Fuel Oil
- Hardware
- Lawn & Garden Supplies
- Mulch
- Top Soil & Fill Dirt
- Wall Stone
- Cobble Stone
- Railroad Ties

DATE

TIME

18
yards

Gross lb.
Tare lb.
Net lb.

Tax

Sub Total

Del. Chg.

TOTAL

104.94

Actions

Prices are for street curb delivery, except where the curb and sidewalk are entirely bridged and a suitable road provided to actual point of unloading inside of curb. We will assume no liability for any damages where delivery is made inside of curb.

Rec'd By

Chip DeGisi

Weigher

BILLING COPY

Del. Parking LOT

OFFICERS CLUB

JOE ROGERS 532-1678

11-13-97 12-97-01798
Date Cust. Phone
TECOM - VINNIE
FT. MCN.
OFFICERS CLUB
FILL
Price Per Ton 5.83 yams
Gross lb. 18 yams
Tare lb.
Net lb.
Price 104.94
Tax
Sub Total
Del. Chg.
TOTAL 104.94
Rec'd By Chip Dayton
Weigher
Other Products Always Available: Fuel Oil, Hardware, Lawn & Garden, Mulch, Top Soil & Fill, Wall Stone, Cobble Stone, Railroad Ties
BILLING

11-13-97 12-97-01798
Date Cust. Phone
TECOM - VINNIE
FT. MCN.
OFFICERS CLUB
FILL
Price Per Ton 5.83 yams
Gross lb. 18 yams
Tare lb.
Net lb.
Price 104.94
Tax
Sub Total
Del. Chg.
TOTAL 104.94
Rec'd By Chip Dayton
Weigher
Other Products Always Available: Fuel Oil, Hardware, Lawn & Garden, Mulch, Top Soil & Fill, Wall Stone, Cobble Stone, Railroad Ties
BILLING

11-13-97 12-97-01798
Date Cust. Phone
TECOM - VINNIE
FT. MCN.
OFFICERS CLUB
FILL
Price Per Ton 5.83 yams
Gross lb. 18 yams
Tare lb.
Net lb.
Price 104.94
Tax
Sub Total
Del. Chg.
TOTAL 104.94
Rec'd By Chip Dayton
Weigher
Other Products Always Available: Fuel Oil, Hardware, Lawn & Garden, Mulch, Top Soil & Fill, Wall Stone, Cobble Stone, Railroad Ties
BILLING

JOHN GUIRE CO.
187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

Date 10/8/10 Cust. PPhone 1297-01798 Driver On _____ Off _____

Customer's Name TECOM - VINNELL Supplies _____
FT. MON.
OFFICERS CLUB

Product FILL Price Per Ton 5.83 yams Price 104.94

DATE _____ TIME 18 yams Gross lb. _____
Tare lb. _____
Net lb. _____

Sub Total _____
Del. Chg. _____
TOTAL 104.94

Other Products Always Available:
• Fuel Oil
• Hardware
• Lawn & Garden S
• Mulch
• Top Soil & Fill
• Wall Stone
• Cobble Stor
• Railroad Tie

Rec'd By Chip Dayton
Weigher _____

Covered prices are for street curb delivery, except where the curb and sidewalk are entirely bridged protected and a suitable road provided to actual point of unloading inside of curb. We will assume no responsibility for any damages where delivery is made inside of curb.

BILLING

JOHN GUIRE CO.
187 BRIGHTON AVE. • LONG BRANCH, N.J. 07740
908-222-0612 • FAX 908-222-8126

Date 10/8/10 Cust. PPhone 1297-01798 Driver On _____ Off _____

Customer's Name TECOM - VINNELL Supplies _____
FT. MON.
OFFICERS CLUB

Product FILL Price Per Ton 5.83 yams Price 104.94

DATE _____ TIME 18 yams Gross lb. _____
Tare lb. _____
Net lb. _____

Sub Total _____
Del. Chg. _____
TOTAL 104.94

Other Products Always Available:
• Fuel Oil
• Hardware
• Lawn & Garden S
• Mulch
• Top Soil & Fill
• Wall Stone
• Cobble Stor
• Railroad Tie

Rec'd By Chip Dayton
Weigher _____

Covered prices are for street curb delivery, except where the curb and sidewalk are entirely bridged protected and a suitable road provided to actual point of unloading inside of curb. We will assume no responsibility for any damages where delivery is made inside of curb.

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BILLING

APPENDIX G

Site Health & Safety Plan

Prepared by TECOM-Vinell Services, dated 10 November 1997

SITE HEALTH AND SAFETY PLAN

Site Name: Gibbs Hall

Date: 11/10/97

Prepared By : Beth Welmaker
TVS

With the assistance of HASP

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1.0 INTRODUCTION

This section of the Site Health and Safety Plan (HASP) document defines general applicability and general responsibilities with respect to compliance with Health and Safety programs.

1.1 Scope and Applicability of the Site Health and Safety Plan

The purpose of this Site Health and Safety Plan is to define the requirements and designate protocols to be followed at the Site during investigation and remediation activities. Applicability extends to all Government employees, contractors, subcontractors, and visitors.

All personnel on site, contractors and subcontractors included, shall be informed of the site emergency response procedures and any potential fire, explosion, health, or safety hazards of the operation. This HASP summarizes those hazards in table 3.1 and defines protective measures planned for the site.

This plan must be reviewed and an agreement to comply with the requirements must be signed by all personnel prior to entering the exclusion zone or contamination reduction zone.

During development of this plan consideration was given to current safety standards as defined by EPA/OSHA/NIOSH, health effects and standards for known contaminants, and procedures designed to account for the potential for exposure to unknown substances. Specifically, the following reference sources have been consulted:

- o OSHA 29 CFR 1910.120 and EPA 40 CFR 311
- o NIOSH/OSHA/USCG/EPA Occ. Health and Safety Guidelines
- o U.S. EPA, OERR ERT Standard Operating Safety Guides
- o (ACGIH) Threshold Limit Values

1.2 Visitors

All visitors entering the contamination reduction zone and exclusion zone at the Site will be required to read and verify compliance with the provisions of this HASP. In addition, visitors will be expected to comply with relevant OSHA requirements such as medical monitoring (Sec. 6.0), training (Sec. 4.0), and respiratory protection (if applicable). Visitors will also be expected to provide their own protective equipment.

In the event that a visitor does not adhere to the provisions of the HASP, he/she will be requested to leave the work area.

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All nonconformance incidents will be recorded in the site log.

2.0 KEY PERSONNEL/IDENTIFICATION OF HEALTH AND SAFETY

2.1 Key Personnel

The following personnel and organizations are critical to the planned activities at the Site. The organizational structure will be reviewed and updated periodically by the site supervisor.

DPW

Joe Fallon

2.2 Site Specific Health and Safety Personnel

The Site Health and Safety Officer (HSO) has total responsibility for ensuring that the provisions of this HASP are adequate and implemented in the field. Changing field conditions may require decisions to be made concerning adequate protection programs. Therefore, it is vital that personnel assigned as HSO be experienced and meet the additional training requirements specified by OSHA in 29 CFR 1910.120 (see Section 4.0 of this HASP). The HSO is also responsible for conducting site inspections on a regular basis in order to ensure the effectiveness of this plan.

The HSO at the site is Beth Welmaker

Designated alternates include:

- o Karen Roach

2.3 Organizational Responsibility

The project direction and responsibility will be under the direction of Joe Fallon, Environmental Specialist with DPW.

3.3 Task Hazard Descriptions

Clearing/grading:

General hazards encountered during mobilization include the following:

- o Back strain from clearing vegetation for road construction with a scythe or other cutting tool.
- o Irritation from dust generated from road construction.
- o Driving vehicles, placing trailers, and collecting rubbish, on uneven surfaces creates a possibility of the vehicle rolling, getting stuck in mud or ditches, or of an accident due to flat tires or striking obstacles, and the vehicles.
- o Crushing or pinching hazard due to trailer placement.
- o Several types of hazards can be associated with utility hook-up depending on the particular work activity. Construction of temporary poles for electrical and/or telephone lines can disturb potentially contaminated soils.

HAZARD PREVENTION

- o Back strain can be prevented by frequent breaks in routine. Use slow, even, movements and proper lifting techniques (i.e., with the legs). Work gloves will reduce the incidence of hand injury and blisters associated with hand scything.
- o Dust suppression techniques, i.e., wetting the soil with water, will reduce dust exposure.
- o Proper vehicle maintenance will prevent avoidable vehicle breakdown in the field. In order to minimize accidents from uneven terrain, a site surveillance should be performed on foot to choose a clear driving path.
- o Seatbelts should be worn at all times.
- o At a minimum, all heavy equipment shall have the safety features outlined in OSHA 29 CFR 1910/1926 Subpart O.

- o Heavy equipment operators should have proper training and experience, and documentation of both. The general provisions of 1910/1926 would apply.
- o Hazards associated with the particular utility would be anticipated and proper measures should be undertaken by the subcontractor employer. General provisions of 29 CFR 1910/1926 Subpart K, should be implemented in order to prevent electrical hazards.

Rubble collection/disposal:

General hazards encountered during mobilization include the following:

- o Back strain from clearing vegetation for road construction with a scythe or other cutting tool.
- o Irritation from dust generated from road construction.
- o Driving vehicles, placing trailers, and collecting rubbish, on uneven surfaces creates a possibility of the vehicle rolling, getting stuck in mud or ditches, or of an accident due to flat tires or striking obstacles, and the vehicles.
- o Crushing or pinching hazard due to trailer placement.
- o Several types of hazards can be associated with utility hook-up depending on the particular work activity. Construction of temporary poles for electrical and/or telephone lines can disturb potentially contaminated soils.

HAZARD PREVENTION

- o Back strain can be prevented by frequent breaks in routine. Use slow, even, movements and proper lifting techniques (i.e., with the legs). Work gloves will reduce the incidence of hand injury and blisters associated with hand scything.
- o Dust suppression techniques, i.e., wetting the soil with water, will reduce dust exposure.
- o Proper vehicle maintenance will prevent avoidable

vehicle breakdown in the field. In order to minimize accidents from uneven terrain, a site surveillance should be performed on foot to choose a clear driving path.

- o Seatbelts should be worn at all times.
- o At a minimum, all heavy equipment shall have the safety features outlined in OSHA 29 CFR 1910/1926 Subpart O.
- o Heavy equipment operators should have proper training and experience, and documentation of both. The general provisions of 1910/1926 would apply.
- o Hazards associated with the particular utility would be anticipated and proper measures should be undertaken by the subcontractor employer. General provisions of 29 CFR 1910/1926 Subpart K, should be implemented in order to prevent electrical hazards.

Soil excavations:

Hazards encountered during soil and test pit excavation include both chemical and physical agents, and are as follows:

- o Exposure to airborne contaminants released during intrusive activities. Flammable atmospheres encountered in excavation.
- o Sides of excavation can cave in. Possible burying or crushing of workers due to 1) absence of shoring, 2) misjudgement of stability, 3) defective shoring, and/or 4) undercut sides.
- o Falling during access/egress or while monitoring or dismounting equipment, or stumbling into excavation.
- o An overhead hazard can result from material, tools, rock, and/or soil falling into the excavation.
- o Congested work area due to too many workers in a small area.

HAZARD PREVENTION

- o Monitor for airborne contaminants. Allow test pits to purge and/or use personal protective equipment.
- o Provide adequate shoring or sloping of sides of the excavation. Regularly inspect trenches for changing conditions.

Solid rock, cemented sand or gravel = 90 degrees

Compact angular gravel = 63 degrees 26 ft. deep

Compacted sharp sand = 33 degrees 41 ft. deep Rounded

loose sand = 26 degrees 34 ft. deep

- o Provide ramps or ladders to trenches to allow safe access and egress.
- o Provide an adequate barrier around open pits. Material from pit must be placed away from edge to prevent cave ins and instability of pit.
- o To prevent overexertion, limit manual lifting and emphasize mechanical means where practical.
- o Maintain ample work room between workers.

substance in the ambient atmosphere and its toxicity.

- o Potential for exposure to substances in air liquids, or other direct contact with material due to work being done.
- o Knowledge of chemicals on-site along with properties such as toxicity, route of exposure, and contaminant matrix.

In situations where the type of chemical, concentration, and possibilities of contact are not known, the appropriate Level of Protection must be selected based on professional experience and judgment until the hazards can be better identified.

5.2 Level A Personnel Protective Equipment:

- o Supplied-air respirator approved by the Mine Safety and Health Administration (MSHA) and National Institute for Occupational Safety and Health (NIOSH). Respirators may be positive pressure-demand, self-contained breathing apparatus (SCBA), or positive pressure-demand, airline respirator (with escape bottle for Immediately Dangerous to Life and Health (IDLH) or potential for IDLH atmosphere)
- o Fully encapsulating chemical-resistant suit
- o Coveralls
- o Long cotton underwear
- o Gloves (inner)
- o Boots, chemical-resistant, steel toe and shank (depending on suit construction, worn over or under suit boot)
- o Hard hat (under suit)
- o Disposable gloves and boot covers (worn over fully encapsulating suit)
- o Cooling unit
- o 2-way radio communications (intrinsically safe)

5.3 Level B Personnel Protective Equipment:

- o Supplied-air respirator (MSHA/NIOSH approved). Respirators may be positive pressure-demand, self-contained breathing apparatus (SCBA), or positive

- o Monitor for airborne contaminants. Allow test pits to purge and/or use personal protective equipment.

- o Provide adequate shoring or sloping of sides of the excavation. Regularly inspect trenches for changing conditions.

Solid rock, cemented sand or gravel = 90 degrees

Compact angular gravel = 63 degrees 26 ft. deep

Compacted sharp sand = 33 degrees 41 ft. deep Rounded

loose sand = 26 degrees 34 ft. deep

- o Provide ramps or ladders to trenches to allow safe access and egress.

- o Provide an adequate barrier around open pits. Material from pit must be placed away from edge to prevent cave ins and instability of pit.

- o To prevent overexertion, limit manual lifting and emphasize mechanical means where practical.

- o Maintain ample work room between workers.

3.4 Physical Hazards

General Description:

POLYCHLORINATED BIPHENYLS-

Polychlorinate biphenyls are colorless to light colored liquids. They are used as coolants in transformers and in electrical capacitors. They are insoluble in water. They are non-volatile and non-combustible. They are extremely persistent in the environment. ((C)AAR, 1986)

Health Hazards:

POLYCHLORINATED BIPHENYLS-

LIQUID OR SOLID: Irritating to skin and eyes. (USCG, 1985)

Fire/Explosion Hazards:

POLYCHLORINATED BIPHENYLS-

Combustible. Irritating gases are generated in fires. (USCG, 1985)

First Aid:

POLYCHLORINATED BIPHENYLS-

If this chemical comes in contact with the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately. Contact lenses should not be worn when working with this chemical. If this chemical comes in contact with the skin, immediately wash the contaminated skin with soap and water. If this chemical penetrates through the clothing, immediately remove the clothing, wash the skin with soap and water, get medical attention promptly. If a person breathes in large amounts of this chemical, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as possible. If this chemical has been swallowed, get medical attention immediately. (NIOSH, 1987)

substance in the ambient atmosphere and its toxicity.

- o Potential for exposure to substances in air liquids, or other direct contact with material due to work being done.
- o Knowledge of chemicals on-site along with properties such as toxicity, route of exposure, and contaminant matrix.

In situations where the type of chemical, concentration, and possibilities of contact are not known, the appropriate Level of Protection must be selected based on professional experience and judgment until the hazards can be better identified.

5.2 Level A Personnel Protective Equipment:

- o Supplied-air respirator approved by the Mine Safety and Health Administration (MSHA) and National Institute for Occupational Safety and Health (NIOSH). Respirators may be positive pressure-demand, self-contained breathing apparatus (SCBA), or positive pressure-demand, airline respirator (with escape bottle for Immediately Dangerous to Life and Health (IDLH) or potential for IDLH atmosphere)
- o Fully encapsulating chemical-resistant suit
- o Coveralls
- o Long cotton underwear
- o Gloves (inner)
- o Boots, chemical-resistant, steel toe and shank (depending on suit construction, worn over or under suit boot)
- o Hard hat (under suit)
- o Disposable gloves and boot covers (worn over fully encapsulating suit)
- o Cooling unit
- o 2-way radio communications (intrinsically safe)

5.3 Level B Personnel Protective Equipment:

- o Supplied-air respirator (MSHA/NIOSH approved). Respirators may be positive pressure-demand, self-contained breathing apparatus (SCBA), or positive

pressure-demand, airline respirator (with escape bottle for IDLH or potential for IDLH atmosphere)

- o Chemical-resistant clothing (coveralls and long-sleeved jacket; hooded, one or two-piece chemical-splash suit; disposable chemical-resistant, one-piece suits)
- o Long cotton underwear
- o Coveralls
- o Gloves (outer), chemical-resistant
- o Gloves (inner), chemical-resistant
- o Boots (outer), chemical-resistant, steel toe and shank
- o Boot covers (outer), chemical-resistant (disposable)
- o Hard hat (face shield)
- o 2-way radio communications (intrinsically safe)

5.4 Level C Personnel Protective Equipment:

- o Air-purifying respirator, full-face, cartridge-equipped (MSHA/NIOSH approved)
- o Chemical-resistant clothing (coveralls; hooded, one-piece or two-piece chemical splash suit; chemical-resistant hood and apron; disposable chemical-resistant coveralls)
- o Coveralls
- o Long cotton underwear
- o Gloves (outer), chemical-resistant
- o Gloves (inner), chemical-resistant
- o Boots (outer), chemical-resistant, steel toe and shank
- o Boot covers (outer), chemical-resistant (disposable)
- o Hard hat (face shield)
- o Escape mask
- o 2-way radio communications (intrinsically safe)

5.5 Level D Personnel Protective Equipment:

- o Coveralls
- o Gloves
- o Boots/shoes, leath or chemical-resistant, steel toe and shank
- o Safety glasses
- o Hard hat

5.6 Reassessment of Protection Program

The Level of Protection provided by PPE selection shall be upgraded or downgraded based upon a change in site conditions or findings of investigations.

When a significant change occurs, the hazards should be reassessed. Some indicators of the need for reassessment are:

- o Commencement of a new work phase, such as the start of drum sampling or work that begins on a different portion of the site.
- o Change in job tasks during a work phase.
- o Change of season/weather.
- o When temperature extremes or individual medical considerations limit the effectiveness of PPE.
- o Contaminants other than those previously identified are encountered.
- o Change in ambient levels of contaminants.
- o Change in work scope which effects the degree of contact with contaminants.

5.7 Work Mission Duration

Before the workers actually begin work in their PPE ensembles the anticipated duration of the work mission should be established. Several factors limit mission length, including:

- o Air supply consumption (SCBA use).

- o Suit/Ensemble permeation and penetration rates for chemicals (section 5.8).
- o Ambient temperature and weather conditions (heat stress cold stress).
- o Capacity of personnel to work in PPE.

5.8 Chemical Resistance and Integrity of Protective Material

The following specific clothing materials are recommended for the site:

Clearing/grading - (Level B)

Inner Gloves - Surgical

Boots/Boot Covers - Steel Toe

Outer Gloves - Work Gloves

Outer Garment/Coveralls - Tyvek

Rubble collection/disposal - (Level B)

Inner Gloves - Surgical

Boots/Boot Covers - TYVEK

Outer Gloves - Work Gloves

Outer Garment/Coveralls - Tyvek

Soil excavations - (Level B)

Inner Gloves - Surgical

Boots/Boot Covers - Latex

Outer Gloves - Work Gloves

Outer Garment/Coveralls - Tyvek

5.9 SOP for Respiratory Protection Devices

The following subsections define standard operating procedures

for air purifying respirators and self-contained breathing apparatus.

5.9.4 Cleaning and Disinfecting Self Contained Breathing Apparatus

Cleaning procedures for Self Contained Breathing Apparatus (SCBA) facepieces are identical to those for Ultratwin APRs. The backpiece is cleaned with cleaning solution and a brush. Following cleaning, the facepiece is combined with the regulator and an operational check is performed.

5.9.5 SCBA Inspection & Checkout

Monthly Inspection:

1. Check cylinder label for current hydrostatic test date.
2. Inspect cylinder for large dents or gouges.
3. Inspect cylinder gauge for damage.
4. Complete routine inspection.
5. Fill out the appropriate records with results and recommendations.

Routine Inspection: Perform immediately prior to donning or after cleaning.

1. Before proceeding, check that the:
 - o High-pressure hose connector is tight on cylinder fitting.
 - o By-pass valve is closed.
 - o Mainline valve is closed.
 - o Regulator outlet is not covered or obstructed.
2. Backpack and harness assembly:
 - o Visually inspect straps for wear, damage, and completeness.
 - o Check wear and function of belt.
 - o Check backplate and cylinder holder for damage.
3. Cylinder and high pressure hose assembly:
 - o Check cylinder to assure that it is firmly attached to backplate.
 - o Open cylinder valve; listen or feel for leakage

around packing and hose connection.

- o Check high pressure hose for damage or leaks.

4. Regulator:

- o Cover regulator outlet with palm of hand.
- o Open mainline valve.
- o Note stoppage of air flow after positive pressure builds.
- o Close mainline valve.
- o Remove hand from regulator outlet.
- o Open by-pass valve slowly to assure proper function.
- o Close by-pass valve.
- o Open mainline valve.
- o Note pressure reading on regulator gauge.
- o Close cylinder valve while keeping hand over regulator outlet.
- o Slowly remove hand from outlet and allow air to flow.
- o Note pressure when low-pressure warning alarm sounds; it should be between 550-650 psi.
- o Remove hand from regulator outlet.
- o Close mainline valve.
- o Check regulator for leaks by blowing air into regulator for 5-10 seconds. Draw air from outlet for 5-10 seconds. If a positive pressure or vacuum cannot be maintained there is a leak. DO NOT USE SCBA.

5. Facepiece and corrugated breathing hose:

- o Inspect hand harness and facepiece for damage, serrations, and deteriorated rubber.
- o Inspect lens for damage and proper seal in facepiece. Inspect exhalation valve for damage and dirt build-up.
- o Stretch breathing hose and carefully inspect for holes and deterioration.
- o Inspect connector for damage and presence of washer.
- o Perform negative pressure test with facepiece donned.

6. Storage:

- o Refill cylinder to 2216 psi.
- o Close cylinder valve.
- o Tightly connect high pressure hose to cylinder.
- o Bleed pressure from high pressure hose by opening mainline valve.
- o Close by-pass valve.
- o Close mainline valve.
- o Fully extend all straps.
- o Store facepiece in a clean plastic bag for protection.

5.10 SOP for Personal Protective

5.10.1 Inspection

Proper inspection of PPE features several sequences of inspection depending upon specific articles of PPE and it's frequency of use. The different levels of inspection are as follows:

Inspection and operational testing of equipment received from the factory or distributor.

Inspection of equipment as it is issued to workers.

Inspection after use or training and prior to maintenance.

Periodic inspection of stored equipment.

Periodic inspection when a question arises concerning the appropriateness of the selected equipment, or when problems with similar equipment arise.

The primary inspection of PPE in use for activities at the Site will occur prior to immediate use and will be conducted by the user. This ensures that the specific device or article has been checked-out by the user that the user is familiar with its use.

Table 5.1 Sample PPE Inspection Checklists

CLOTHING

Before use:

- o Determine that the clothing material is correct for the specified task at hand.
- o Visually inspect for:
 - imperfect seams
 - non-uniform coatings
 - tears
 - malfunctioning closures
- o Hold up to light and check for pinholes.
- o Flex product:
 - observe for cracks
 - observe for other signs of shelf deterioration
- o If the product has been used previously, inspect inside and out for signs of chemical attack:
 - discoloration
 - swelling
 - stiffness

During the work task

- o Evidence of chemical attack such as discoloration, swelling, stiffening, and softening. Keep in mind, however, that chemical permeation can occur without any visible effects.
- o Closure failure.
- o Tears.
- o Punctures.
- o Seam Discontinuities.

GLOVES

Before use:

- o Visually inspect for:
 - imperfect seams
 - tears
 - non-uniform coating
 - pressurize glove with air; listen for pin-hole leaks.

5.11 Specific Levels of Protection Planned for the Site

The following levels of protection will be utilized during activities at the Site:

- o Level B

Table 5.2 presents the level of protection planned for the completion of individual task assignments and the specific components of each protective ensemble.

TABLE 5.2
SPECIFIC LEVELS OF PROTECTION PLANNED FOR THE
TASK ASSIGNMENTS AT THE SITE

LEVEL A Tasks

LEVEL A Tasks (modified)

LEVEL B Tasks

- o Clearing/grading
- o Rubble collection/disposal
- o Soil excavations

LEVEL B Tasks (modified)

LEVEL C Tasks

LEVEL C Tasks (modified)

LEVEL D Tasks

LEVEL D Tasks (modified)

6.0 MEDICAL SURVEILLANCE REQUIREMENTS

Medical monitoring programs are designed to track the physical condition of employees on a regular basis as well as survey preemployment or baseline conditions prior to potential exposures. The medical surveillance program is a part of each employer's Health and Safety program.

6.1 Baseline or Preassignment Monitoring

Prior to being assigned to a hazardous or a potentially hazardous activity involving exposure to toxic materials, an employee must receive a preassignment or baseline physical. The contents of the physical are to be determined by the employer's medical consultant. As suggested by NIOSH/OSHA/USCG/EPA's Occupational Safety & Health Guidance Manual for Hazardous Waste Site Activities, the minimum medical monitoring requirements for work at the Site are as follows:

- Complete medical and work histories.
- Physical examination.
- Pulmonary function tests (FVC and FEV1).
- Chest X-ray (every 2 years).
- EKG.
- Eye examination and visual acuity.
- Audiometry.
- Urinalysis.
- Blood chemistry and heavy metals toxicology.

The preassignment physical should categorize employees as fit-for-duty and able to wear respiratory protection.

6.2 Periodic Monitoring

In addition to a baseline physical, all employees require a periodic physical within the last 12 months unless the advising physician believes a shorter interval is appropriate. The employer's medical consultant should prescribe an adequate medical which fulfills OSHA 29 CFR 1910.120 requirements. The preassignment medical outlined above may be applicable.

All personnel working in contaminated or potentially contaminated areas at the Site will verify currency (within 12 months) with respect to medical monitoring. This is done by indicating date of last physical on the safety plan agreement form.

6.3 Site Specific Medical Monitoring

For activities at the Site, the following specific tests will be required prior to individuals entering the Exclusion Zone or Contamination Reduction Zone.

6.4 Exposure/Injury/Medical Support

As a follow-up to an injury or possible exposure above established exposure limits, all employees are entitled to and encouraged to seek medical attention and physical testing. Depending upon the type of exposure, it is critical to perform follow-up testing within 24-48 hours. It will be up to the employers medical consultant to advise the type of test required to accurately monitor for exposure effects.

6.5 Exit Physical

At termination of employment or reassignment to an activity or location which does not represent a risk of exposure to hazardous substances, an employee shall require an exit physical. If his/her last physical was within the last 6 months, the advising medical consultant has the right to determine adequacy and necessity of exit exam.

7.0 FREQUENCY AND TYPES OF AIR MONITORING/SAMPLING

This section explains the general concepts of an air monitoring program and specifies the surveillance activities that will take place during project completion at the Site.

The purpose of air monitoring is to identify and quantify airborne contaminants in order to verify and determine the level of worker protection needed. Initial screening for identification is often qualitative, i.e., the contaminant, or the class to which it belongs, is demonstrated to be present but the determination of its concentration (quantification) must await subsequent testing. Two principal approaches are available for identifying and/or quantifying airborne contaminants:

- o The onsite use of direct-reading instruments.
- o Laboratory analysis of air samples obtained by gas sampling bag, collection media (i.e., filter, sorbent), and/or wet-contaminant collection methods.

7.1 Direct-Reading Monitoring Instruments

Unlike air sampling devices, which are used to collect samples for subsequent analysis in a laboratory, direct-reading instruments provide information at the time of sampling, enabling rapid decision-making. Data obtained from the real-time monitors are used to assure proper selection of personnel protection equipment, engineering controls, and work practices. Overall, the instruments provide the user the capability to determine if site personnel are being exposed to concentrations which exceed exposure limits or action levels for specific hazardous materials.

Of significant importance, especially during initial entries, is the potential for IDLH conditions or oxygen deficient atmospheres. Real-time monitors can be useful in identifying any IDLH conditions, toxic levels of airborne contaminants, flammable atmospheres, or radioactive hazards. Periodic monitoring of conditions is critical, especially if exposures may have increased since initial monitoring or if new site activities have commenced.

Table 7.1, excerpted from Occupational Safety and Health Guidelines for Hazardous Waste Site Activities, provides an overview of available monitoring instrumentation and their specific operating parameters.

TABLE 7.1 SOME DIRECT-READING INSTRUMENTS FOR GENERAL SURVEY

Instrument: Combustible gas indicator (CGI)

Hazard Monitored: Combustible gases and vapors.

Application: Measures the concentration of a combustible gas or vapor.

Detection Method: A filament, usually made of platinum, is heated by burning the combustible gas or vapor. The increase in heat is measured. Gases and vapors are ionized in a flame. A current is produced in proportion to the number of carbon atoms present.

General Care/Maintenance: Recharge or replace battery. Calibrate immediately before use.

Typical Operating Time: Can be used for as long as the battery lasts, or for the recommended interval between calibrations, whichever is less.

Instrument: Flame Ionization Detector (FID) with Gas Chromatography Option. Example: Foxboro OVA.

Hazard Monitored: Many organic gases and vapors.

Application: In survey mode, detects the concentration of many organic gases and vapors. In gas chromatography (GC) mode identifies and measures specific compounds. In survey mode, all the organic compounds are ionized and detected at the same time. In GC mode, volatile species are separated.

General Care/Maintenance: Recharge or replace battery. Monitor fuel and/or combustion air supply gauges. Perform routine maintenance as described in the manual. Check for leaks.

Typical Operating Time: 8 hours; 3 hours with strip chart recorder.

Instrument: Portable Infrared (IR) Spectrophotometer

Hazard Monitored: Many gases and vapors.

Application: Measures concentration of many gases and vapors in air. Designed to quantify one or two component mixtures.

Detection Method: Passes different frequencies of IR through the sample. The frequencies absorbed are specific for each compound.

General Care/Maintenance: As specified by manufacturer.

Instrument: Ultraviolet (UV) Photoionization Detector (PID)
Example: HNU.

Hazard Monitored: Many organic and some inorganic gases and vapors.

Application: Detects total concentration of many organic and some inorganic gases and vapors. Some identification of compounds are possible if more than one probe is measured.

Detection Method: Ionizes molecules using UV radiation; produces a current that is proportional to the number of ions.

General Care/Maintenance: Recharge or replace battery. Regularly clean lamp window. Regularly clean and maintain the instrument and accessories.

Typical Operating Time: 10 hours. 5 hours with strip chart recorder.

Instrument: Direct Reading Colorimetric Indicator Tube

Hazard Measured: Specific gas and vapors.

Application: Measures concentration of specific gases and vapors.

Detection Method: The compound reacts with the indicator chemical in the tube, producing a stain whose length or color change is proportional to the compound's concentration.

General Care/Maintenance: Do not use a previously opened tube even if the indicator chemical is not stained. Check pump for leaks before and after use. Refrigerate before use to maintain a shelf life of about 2 years. Check expiration date of tubes. Calibrate pump volume at least quarterly. Avoid rough handling which may cause channeling.

Instrument: Oxygen Meter

Hazard Monitored: Oxygen (O₂)

Application: Measures the percentage of O₂ in the air.

Detection Method: Uses an electrochemical sensor to measure the partial pressure of O₂ in the air, and converts that reading to O₂ concentration.

General Care/Maintenance: Replace detector cell according to manufacturers recommendations. Recharge or replace batteries prior to expiration of the specified interval. If the ambient air is more than 0.5% CO₂, replace the detector cell frequently.

Typical Operating Time: 8-12 hours.

Instrument: Real Time Aerosol Monitor

Hazard Monitored: Particulates

Application: Measures total particulates in air.

Detection Method: Uses an internal light source. The particulates deflect the light beam and the amount of diffraction is converted into concentration (mg/m³).

General Care/Maintenance: Recharge batteries. Replace dessicant when necessary.

Typical Operating Time: 8-12 hours.

Instrument: Monitox

Hazard Monitored: Gases and Vapors

Application: Measures specific gases and vapors

Detection Method: Electrochemical sensor relatively specific for the chemical species in question.

General Care/Maintenance: Moisten sponge before use; check the function switch; change the battery when needed.

Instruments: Gamma Radiation Survey Instrument

Hazard Monitored: Gamma Radiation

Application: Environmental radiation monitor

Detection Method: Scintillation detector

General Care/Maintenance: Must be calibrated annually at a specialized facility.

Typical Operating Time: Can be used for as long as the battery lasts, or for the recommended interval between calibrations, whichever is less.

After site mitigation activities have commenced, the selective monitoring of high-risk workers, i.e., those who are closest to the source of contaminant generation, is essential. Personal monitoring samples should be collected in the breathing zone and, if workers are wearing respiratory protective equipment, outside the facepiece.

Those employees working closest with the source have the highest likelihood of being exposed to concentrations which exceed established exposure limits. Representative sampling approaches emphasizing worst case conditions, those employees with the greatest risk of exposure, is acceptable. However, the sampling strategy may change if the operation or tasks change onsite or if exposures potentially increase.

7.3 Specific Contaminants to be monitored at the Site

The following checklist provides a summary of the contaminants to be monitored for and frequency/schedule of monitoring. The air sampling checklist will serve as a site monitoring plan.

7.3.1 Site Air Monitoring and Sampling Program

A. Air Monitoring Instruments

Flame Ionization Detector (FID)

Frequency : Twice daily - once in morning and once in afternoon

Locations :

Upwind and downwind of site activities

Near residents, etc.

B. Action Levels

Particulates:

Action Level	Action
-----	-----
Depends on contaminant	Consult standard reference manuals for air concentration/toxicity data. Action level depends on PEL/REL/TLV. Action Level is 1/2 the current standard. See Table 3.1.

C. Reporting Format

- o Trip report
- o Field notebook
- o Air monitoring log

8.0 SITE CONTROL MEASURES

The following section defines measures and procedures for maintaining site control. Site control is an essential component in the implementation of the site health and safety program.

8.1 Buddy System

During all Level B activities or when some conditions present a risk to personnel, the implementation of a buddy system is mandatory. A buddy system requires at least two people who work as a team; each looking out for each other. For example, Level B operations generally require three people. Table 8.1 lists those tasks which require a buddy system and any additional site control requirements.

8.2 Site Communications Plan

Successful communications between field teams and contact with personnel in the support zone is essential. The following communications systems will be available during activities at the Site.

- o Two-way radio
- o Intrinsically safe radio
- o Whistle
- o Hand Signals

Signal	Definition
-----	-----
Hands clutching throat	Out of air/cannot breath
Hands on top of head	Need assistance
Thumbs up	OK/I am all right/I understand
Thumbs down	No/negative
Arms waving upright	Send backup support
Grip partners wrist	Exit area immediately

8.3 Work Zone Definition

The three general work zones established at the Site are the Exclusion Zone, Contamination Reduction Zone, and Support Zone. Figure 8.1 provides a site map with the work zones designated on it.

The Exclusion Zone is defined as the area where contamination is either known or likely to be present, or because of activity, will provide a potential to cause harm to personnel. Entry into the Exclusion Zone requires the use of personnel protective equipment.

The Contamination Reduction Zone is the area where personnel conduct personal and equipment decontamination. It is essentially a buffer zone between contaminated areas and clean areas. Activities to be conducted in this zone will require personal protection as defined in the decontamination plan.

The Support Zone is situated in clean areas where the chance to encounter hazardous materials or conditions is minimal. Personal protective equipment is therefore not required.

8.4 Nearest Medical Assistance

Figure 8.2 provides a map of the route to the nearest medical facility which can provide emergency care for individuals who may experience an injury or exposure on-site. The route to the hospital should be verified by the HSO, and should be familiar to all site personnel.

The following individuals on site have current certification in CPR and/or first aid:

- o Joe Rogers

8.5 Safe Work Practices

Table 8.2 provides a list of standing orders for the Exclusion Zone.

Table 8.3 provides a list of standing orders for the Contamination Reduction Zone.

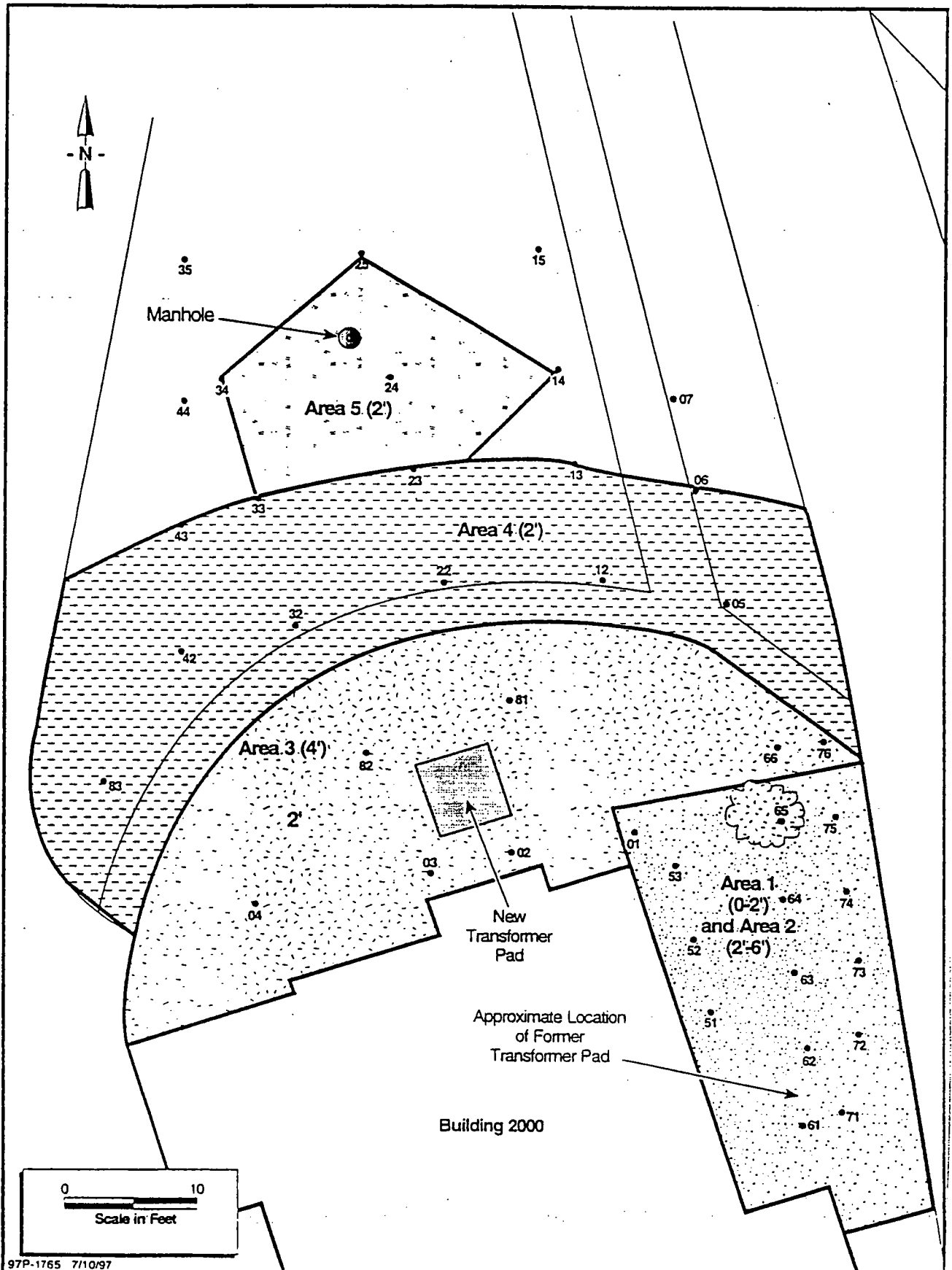
8.6 Emergency Alarm Procedures

The warning signals described in section 10.4 "Evacuation Routes and Procedures," will be deployed in the event of an emergency. Communication signals will also be used according to section 8.2.

TABLE 8.1. PERSONNEL REQUIREMENTS

Task	Control Measures	Comments
<hr/>		
**Clearing/grading		
	Buddy system	
	Line of Sight	
**Rubble collection/disposal		
	Buddy system	
	Line of Sight	
**Soil excavations		
	Buddy system	
	Line of Sight	

FIGURE 8.1
SITE MAP DEPICTING WORK ZONES



Tinton Falls Ave → →

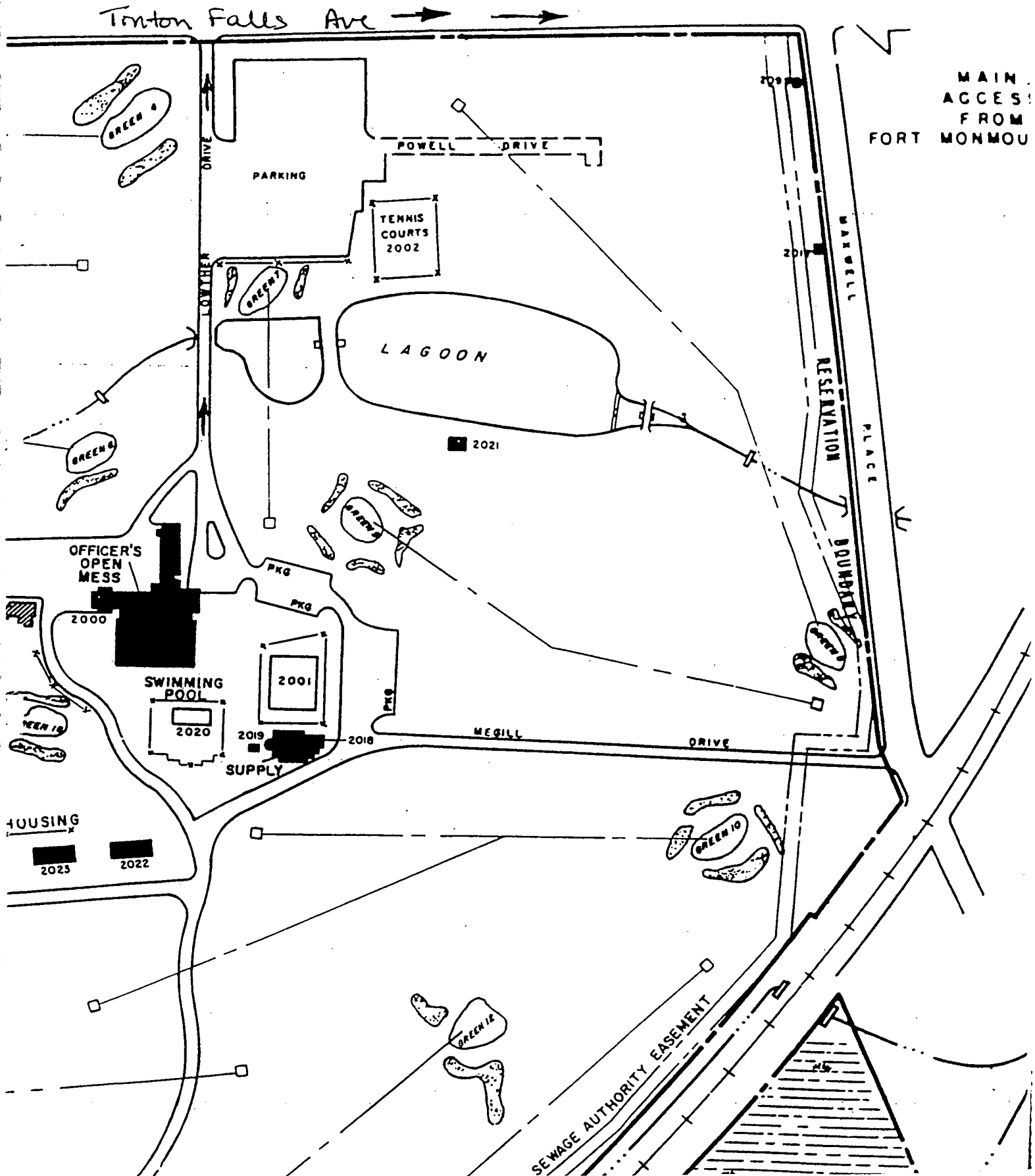


TABLE 8.2 STANDING ORDERS FOR EXCLUSION ZONE

- o No smoking, eating, or drinking in this zone.
- o No horse play.
- o No matches or lighters in this zone.
- o Check-in on entrance to this zone.
- o Check-out on exit from this zone.
- o Implement the communications system.
- o Line of sight must be in position.
- o Wear the appropriate level of protection as defined in the Safety Plan.

TABLE 8.3 STANDING ORDERS FOR CONTAMINATION REDUCTION ZONE

- o No smoking, eating, or drinking in this zone.
- o No horse play.
- o No matches or lighters in this zone.
- o Wear the appropriate level of protection.

9.0 DECONTAMINATION PLAN

Table 5.2 lists the tasks and specific levels of protection required for each task. Consistent with the levels of protection required, the decontamination figure provides a step by step representation of the personnel decontamination process for either level A, B, or C. These procedures should be modified to suit site conditions and protective ensembles in use.

9.1 Standard Operating Procedures

Decontamination involves the orderly controlled removal of contaminants. Standard decontamination sequences are presented in the decontamination figure. All site personnel should minimize contact with contaminants in order to minimize the need for extensive decon.

9.2 Levels of Decontamination Protection Required for Personnel

The levels of protection required for personnel assisting with decontamination will be Level B

The Site Safety Officer is responsible for monitoring decontamination procedures and determining their effectiveness.

9.3 Equipment Decontamination

Sampling equipment will be decontaminated in accordance with procedures as defined in the work plan, Chapter 9
The sequence of decontamination steps required for non-sampling equipment and heavy machinery can be found in the Quality Assurance Sampling Plan.

9.4 Disposition of Decontamination Wastes

All equipment and solvents used for decontamination shall be decontaminated or disposed of properly. Commercial laundries or cleaning establishments that decontaminate protective clothing or equipment shall be informed of the potentially harmful effects of exposures.

FIGURE 9.1.
LEVEL A DECONTAMINATION STEPS

- Step 1 Segregated equipment drop
- Step 2 Boot cover and glove wash
- Step 3 Boot cover and glove rinse
- Step 4 Tape removal - boot and glove
- Step 5 Boot cover removal
- Step 6 Outer glove removal
- Step 7 Suit/safety boot wash
- Step 8 Suit/safety boot rinse
- Step 9 Safety boot removal
- Step 10 Fully encapsulating suit and hard hat removal
- Step 11 SCBA backpack removal
- Step 12 Inner glove wash
- Step 13 Inner glove rinse
- Step 14 Face piece removal
- Step 15 Inner glove removal
- Step 16 Inner clothing removal
- Step 17 Field wash
- Step 18 Redress

FIGURE 9.2.
LEVEL B DECONTAMINATION STEPS

- Step 1 Segregated equipment drop
- Step 2 Boot cover and glove wash
- Step 3 Boot cover and glove rinse
- Step 4 Tape removal - outer glove and boot
- Step 5 Boot cover removal
- Step 6 Outer glove removal
- Step 7 Suit/safety boot wash
- Step 8 Suit/SCBA/boot/glove rinse
- Step 9 Safety boot removal
- Step 10 SCBA backpack removal
- Step 11 Splash suit removal
- Step 12 Inner glove wash
- Step 13 Inner glove rinse
- Step 14 Face piece removal
- Step 15 Inner glove removal
- Step 16 Inner clothing removal
- Step 17 Field wash
- Step 18 Redress

FIGURE 9.3.
LEVEL C DECONTAMINATION STEPS

- Step 1 Segregated equipment drop
- Step 2 Boot cover and glove wash
- Step 3 Boot cover and glove rinse
- Step 4 Tape removal
- Step 5 Boot cover removal
- Step 6 Outer glove removal
- Step 7 Suit/safety boot wash
- Step 8 Suit/safety boot rinse
- Step 9 Safety boot removal
- Step 10 Splash suit removal
- Step 11 Inner glove wash
- Step 12 Inner glove rinse
- Step 13 Face piece removal
- Step 14 Inner glove removal
- Step 15 Inner clothing removal
- Step 16 Field wash
- Step 17 Redress

- FIGURE 9.4.
LEVEL D DECONTAMINATION STEPS
- Step 1 Remove outer garments (i.e., coveralls)
 - Step 2 Remove gloves
 - Step 3 Wash hands and face

10.0 EMERGENCY RESPONSE/CONTINGENCY PLAN

This section describes contingencies and emergency planning procedures to be implemented at the Site. This plan is compatible with local, state and federal disaster and emergency management plans as appropriate.

10.1 Pre-Emergency Planning

During the site briefings held periodically/daily, all employees will be trained in and reminded of provisions of the emergency response plan, communication systems, and evacuation routes. Table 10.1 identifies the hazardous conditions associated with specific site activities. The plan will be reviewed and revised if necessary, on a regular basis by the HSO. This will ensure that the plan is adequate and consistent with prevailing site conditions.

10.2 Personnel Roles and Lines of Authority

The Site Supervisor has primary responsibility for responding to and correcting emergency situations. This includes taking appropriate measure to ensure the safety of site personnel and the public. Possible actions may involve evacuation of personnel from the site area, and evacuation of adjacent residents. He/she is additionally responsible for ensuring that corrective measures have been implemented, appropriate authorities notified, and follow-up reports completed. The HSO may be called upon to act on the behalf of the site supervisor, and will direct responses to any medical emergency. The individual contractor organizations are responsible for assisting the project manager in his/her mission within the parameters of their scope of work.

The Site Supervisor(s): Joe Rogers.

The HSO is Beth Welmaker

Alternates are:

- o Karen Roach

10.3 Emergency Recognition/Prevention

Table 3.1 provides a listing of chemical and physical hazards onsite. Additional hazards as a direct result of site activities are listed in Table 10.1 as are prevention and control techniques/mechanisms. Personnel will be familiar with techniques of hazard recognition from preassignment training

and site specific briefings. The HSO is responsible for ensuring that prevention devices or equipment is available to personnel.

10.4 Evacuation Routes/Procedures

In the event of an emergency which necessitates an evacuation of the site, the following alarm procedures will be implemented:

Evacuation alarm notification should be made using three short blasts on the air horn, supplemented using the hand held radios. All personnel should evacuate upwind of any activities. Insure that a predetermined location is identified off-site in case of an emergency, so that all personnel can be accounted for.

Personnel will be expected to proceed to the closest exit with your buddy, and mobilize to the safe distance area associated with the evacuation route. Personnel will remain at that area until the re-entry alarm is sounded or an authorized individual provides further instructions.

TABLE 10.1
EMERGENCY RECOGNITION/CONTROL MEASURES

HAZARD -----	PREVENTION/CONTROL -----	LOCATION -----
Fire/Explosion	Fire Extinguisher Alarm System Fire Inspections	On Vehicle
Spill	Berms/Dikes Sorbent Materials Foams	Contact the Fire Dept.
Air Release	Water Spray Foam Alarm System Evacuation Routes	

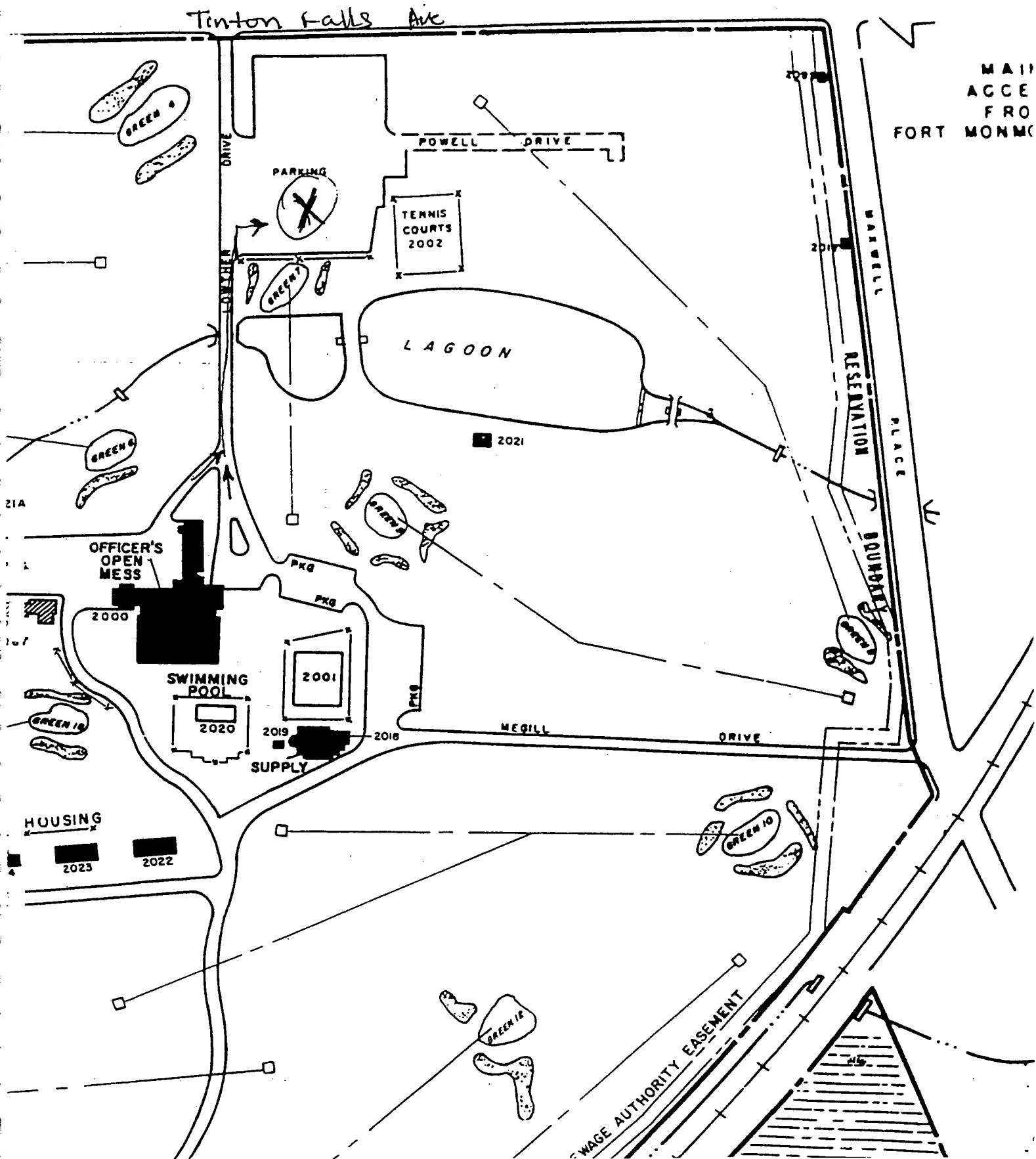
Figure 10.1 provides a map depicting evacuation routes for the site and immediate area. Also indicated are muster areas and safe distances in the event of a major incident.

10.7 Emergency Contact/Notification System

The following list provides names and telephone numbers for emergency contact personnel. In the event of a medical emergency, personnel will take direction from the HSO and notify the appropriate emergency organization. In the event of a fire or spill, the site supervisor will notify the appropriate local, state, and federal agencies.

<u>Organization</u>	<u>Contact</u>	<u>Telephone</u>
Ambulance:	Work Control	911
Police:		911
Fire:		911
State Police:		911
Hospital 1:		911
Hospital 2:		
Poison Control Center		
Regional EPA:		
EPA Emergency Response Team		908-321-6660
State Authority:		
National Response Center		800-424-8802
Center for Disease Control		404-488-4100
Chemtrec		800-424-9555

FIGURE 10.1
EVACUATION ROUTES AND SAFE DISTANCES



10.8 Emergency Medical Treatment Procedures

Any person who becomes ill or injured in the exclusion zone must be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination should be completed and first aid administered prior to transport. If the patient's condition is serious, at least partial decontamination should be completed (i.e., complete disrobing of the victim and redressing in clean coveralls or wrapping in a blanket.) First aid should be administered while awaiting an ambulance or paramedics. All injuries and illnesses must immediately be reported to the project manager.

Any person being transported to a clinic or hospital for treatment should take with them information on the chemical(s) they have been exposed to at the site. This information is included in Table 3.1.

Any vehicle used to transport contaminated personnel will be treated and cleaned as necessary.

10.9 Fire or Explosion

In the event of a fire or explosion, the local fire department should be summoned immediately. Upon their arrival, the project manager or designated alternate will advise the fire commander of the location, nature, and identification of the hazardous materials onsite.

If it is safe to do so, site personnel may:

- o Use fire fighting equipment available onsite to control or extinguish the fire; and,
- o Remove or isolate flammable or other hazardous materials which may contribute to the fire.

10.10 Spill or Leaks

In the event of a spill or a leak, site personnel will:

- o Inform their supervisor immediately;
- o Locate the source of the spillage and stop the flow if it can be done safely; and,
- o Begin containment and recovery of the spilled materials.

10.11 Emergency Equipment/Facilities

Figure 10.2 provides a map of the site and identifies the location of the following emergency equipment:

- o First aid kit
- o Fire extinguisher

11.0 CONFINED SPACE ENTRY PROCEDURES

No Confined Space Entries Will Be Performed

12.0 SPILL CONTAINMENT PROGRAM

The procedures defined in this section comprise the spill containment program in place for activities at the Site.

- o All drums and containers used during the clean-up shall meet the appropriate DOT, OSHA, and EPA regulators for the waste that they will contain.
- o Drums and containers shall be inspected and their integrity assured prior to being moved. Drums or containers that cannot be inspected before being moved because of storage conditions, shall be positioned in an accessible location and inspected prior to further handling.
- o Operations on site will be organized so as to minimize the amount of drum or container movement.
- o Employees involved in the drum or container operations shall be warned of the hazards associated with the containers.
- o Where spills, leaks, or ruptures may occur, adequate quantities of spill containment equipment (absorbent, pillows, etc.) will be stationed in the immediate area. The spill containment program must be sufficient to contain and isolate the entire volume of hazardous substances being transferred.
- o Drums or containers that cannot be moved without failure, shall be emptied into a sound container.
- o Fire extinguishing equipment meeting 29 CFR part 1910. subpart I shall be on hand and ready for use to control fires.

13.0 HAZARD COMMUNICATION

In order to comply with 29 CFR 1910.1200, Hazard Communication, the following written Hazard Communication Program has been established. All employees will be briefed on this program, and have a written copy for review.

A. CONTAINER LABELING

All containers received on site will be inspected to ensure the following: (1) all containers will be clearly labeled as to the contents; (2) the appropriate hazard warnings will be noted; and (3) the name and address of the manufacturer will be listed.

All secondary containers will be labeled with either an extra copy of the original manufacturer's label or with generic labels which have a block for identify and blocks for the hazard warning.

B. MATERIAL SAFETY DATA SHEETS (MSDSs)

Copies of MSDSs for all hazardous chemicals known or suspected on site will be maintained in the work area. MSDSs will be available to all employees for review during each work shift.

C. EMPLOYEE TRAINING AND INFORMATION

Prior to starting work, each employee will attend a health and safety orientation and will receive information and training on the following: (1) an overview of the requirements contained in the Hazard Communication Standard, 29 CFR 1910.1200; (2) chemicals present in their workplace operations; (3) location and availability of a written hazard program; (4) physical and health effects of the hazardous chemicals; (5) methods and observation techniques used to determine the presence or release of hazardous chemicals; (6) how to lessen or prevent exposure to these hazardous chemicals through usage of control/work practices and personal protective equipment; (7) emergency procedures to follow if they are exposed to these chemicals; (8) how to read labels and review MSDSs to obtain appropriate hazard information; (9) location of MSDS file and location of hazardous chemical list.

APPENDIX H

**Post-Excavation Soil Analytical Data Packages
Fort Monmouth Environmental Testing Laboratory – Analytical Data Report
Project CW-7, Lab ID #:3165, 10 December 1997**

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS

PHONE: (732) 532-6224 FAX: (732) 532-6263

WET-CHEM - METALS - ORGANICS - FIELD SAMPLING

CERTIFICATIONS: NJDEP #13461, NYSDOH #11699



ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: CW-7

Bldg. 2000/PCB's

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
A2 96-102"	3165.01	Soil	19-Nov-97 15:35	11/19/97
B2 96-102"	3165.02	Soil	19-Nov-97 15:25	11/19/97
C 96-102"	3165.03	Soil	19-Nov-97 15:15	11/19/97
D 96-102"	3165.04	Soil	19-Nov-97 15:30	11/19/97
E 96-102"	3165.05	Soil	19-Nov-97 15:20	11/19/97
F 96-102"	3165.06	Soil	19-Nov-97 15:10	11/19/97
A1 0-6"	3168.01	Soil	20-Nov-97 10:22	11/20/97
B1 0-6"	3168.02	Soil	20-Nov-97 10:25	11/20/97
C1 0-6"	3168.03	Soil	20-Nov-97 10:29	11/20/97
G 72-78"	3168.04	Soil	20-Nov-97 14:15	11/20/97
H 72-78"	3168.05	Soil	20-Nov-97 14:20	11/20/97
I 72-78"	3168.06	Soil	20-Nov-97 14:25	11/20/97
J 48-54"	3178.01	Soil	21-Nov-97 16:00	11/25/97
K 48-54"	3178.02	Soil	21-Nov-97 16:03	11/25/97
L 48-54"	3178.03	Soil	21-Nov-97 16:06	11/25/97
M 48-54"	3178.04	Soil	21-Nov-97 16:09	11/25/97
N 48-54"	3178.05	Soil	21-Nov-97 16:12	11/25/97
O 48-54"	3178.06	Soil	21-Nov-97 16:15	11/25/97
P 48-54"	3179.01	Soil	23-Nov-97 14:46	11/25/97
Q 48-54"	3179.02	Soil	23-Nov-97 14:49	11/25/97
R 48-54"	3179.03	Soil	23-Nov-97 14:52	11/25/97
S 48-54"	3179.04	Soil	23-Nov-97 14:55	11/25/97
T 48-54"	3179.05	Soil	23-Nov-97 14:59	11/25/97
U 48-54"	3179.06	Soil	23-Nov-97 15:02	11/25/97
V1 0-6"	3179.07	Soil	23-Nov-97 15:05	11/25/97
V2 48-54"	3179.08	Soil	23-Nov-97 15:08	11/25/97
W 24-30"	3182.01	Soil	25-Nov-97 14:33	11/25/97
X 24-30"	3182.02	Soil	25-Nov-97 14:36	11/25/97
Y 24-30"	3182.03	Soil	25-Nov-97 14:39	11/25/97
Z 24-30"	3182.04	Soil	25-Nov-97 14:42	11/25/97
AA 24-30"	3182.05	Soil	25-Nov-97 14:45	11/25/97
BB 24-30"	3182.06	Soil	25-Nov-97 14:48	11/25/97

SAMPLE LOCATION AND IDENTIFICATION

CC 24-30"	3182.07	Soil	25-Nov-97 14:48	11/25/97
DD 24-30"	3182.08	Soil	25-Nov-97 14:50	11/25/97
EE1 0-6"	3182.09	Soil	25-Nov-97 14:52	11/25/97
EE2 24-30"	3182.10	Soil	25-Nov-97 14:54	11/25/97
FF 24-30"	3182.11	Soil	25-Nov-97 14:56	11/25/97
GG 24-30"	3182.12	Soil	25-Nov-97 14:58	11/25/97
HH 24-30"	3182.13	Soil	25-Nov-97 15:00	11/25/97
II 0-6"	3182.14	Soil	25-Nov-97 15:03	11/25/97
JJ 0-6"	3182.15	Soil	25-Nov-97 15:05	11/25/97
KK 0-6"	3182.16	Soil	25-Nov-97 15:08	11/25/97
LL 0-6"	3182.17	Soil	25-Nov-97 15:10	11/25/97
A1 0-6"	3299.01	Soil	27-Jan-98 09:38	01/28/98
A2 12-18"	3299.02	Soil	27-Jan-98 09:38	01/28/98
A3 24-30"	3299.03	Soil	27-Jan-98 09:38	01/28/98
A4 36-42"	3299.04	Soil	27-Jan-98 09:38	01/28/98
B1 0-6"	3299.05	Soil	27-Jan-98 10:36	01/28/98
B2 12-18"	3299.06	Soil	27-Jan-98 10:36	01/28/98
B3 24-30"	3299.07	Soil	27-Jan-98 10:36	01/28/98
B4 36-42"	3299.08	Soil	27-Jan-98 10:36	01/28/98
C1 0-6"	3299.09	Soil	27-Jan-98 11:14	01/28/98
C2 12-18"	3299.10	Soil	27-Jan-98 11:14	01/28/98
C3 24-30"	3299.11	Soil	27-Jan-98 11:14	01/28/98
C4 36-42"	3299.12	Soil	27-Jan-98 11:14	01/28/98
D1 0-6"	3299.13	Soil	27-Jan-98 12:57	01/28/98
D2 12-18"	3299.14	Soil	27-Jan-98 12:57	01/28/98
D3 24-30"	3299.15	Soil	27-Jan-98 12:57	01/28/98
D4 36-42"	3299.16	Soil	27-Jan-98 12:57	01/28/98
E1 0-6"	3299.17	Soil	27-Jan-98 13:47	01/28/98
E2 12-18"	3299.18	Soil	27-Jan-98 13:47	01/28/98
E3 24-30"	3299.19	Soil	27-Jan-98 13:47	01/28/98
E4 36-42"	3299.20	Soil	27-Jan-98 13:47	01/28/98
F1 0-6"	3299.21	Soil	27-Jan-98 14:31	01/28/98
F2 12-18"	3299.22	Soil	27-Jan-98 14:31	01/28/98
F3 24-30"	3299.23	Soil	27-Jan-98 14:31	01/28/98
F4 36-42"	3299.24	Soil	27-Jan-98 14:31	01/28/98
G1 0-6"	3299.25	Soil	27-Jan-98 15:15	01/28/98
G2 12-18"	3299.26	Soil	27-Jan-98 15:15	01/28/98
G3 24-30"	3299.27	Soil	27-Jan-98 15:15	01/28/98
G4 36-42"	3299.28	Soil	27-Jan-98 15:15	01/28/98
DUP	3299.29	Soil	27-Jan-98	01/28/98
Field Blank	3299.30	Soil	27-Jan-98	01/28/98
G2 144-150"	3326.01	Soil	09-Feb-98 15:00	02/09/98
H2 144-150"	3326.02	Soil	09-Feb-98 15:00	02/09/98
A3 0-6"	3330.01	Soil	10-Feb-98 10:00	02/10/98
B3 0-6"	3330.02	Soil	10-Feb-98 10:05	02/10/98

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
PCB's

 2.8.98
Daniel Wright/Date
Laboratory Director

CHAIN OF CUSTODY

Tel (908) 532-4359 Fax (908) 532-3484 EMail:appleby@doim6.monmouth.army.mil

Chain of Custody Record

[illegible]



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELF-M-PW-EV, Fort Monmouth, NJ 07703

Tel (908) 532-4359 Fax (908) 532-3484 EMail: appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: Joe Fallon		Project No: Site CW-7		Analysis Parameters		Comments:	
Phone #: X26223	Location: Bldg 2000	Sample #					
SAMPLERS Name / Company: Joe Fallon OPLW		Lab Sample I.D.	Sample Location	Date	Time	Type	bottles
01	A1 0-6"	11/20/97	10:22 AM	Soil	1		
02	B1 0-6"	11/20/97	10:25 AM		1		
03	C1 0-6"	11/20/97	10:29 AM		1		
04	G 72"-78"	11/20/97	2:45 PM		1		
05	H 72"-78"	11/20/97	2:20 PM		1		
06	I 72"-78"	11/20/97	2:25 PM		1		
Relinquished by (signature): Joe Fallon		Date/Time: 11/20/97 10:10 AM	Received by (signature): Joe Fallon		Relinquished by (signature):		
Relinquished by (signature):		Date/Time:	Received by (signature):		Relinquished by (signature):		
Report Type: () Full, () Reduced, () Standard, () Screen / non-certified		Remarks:					
Turnaround time: () Standard 4 wks, () Rush Days, () ASAP Verbal Hrs.							

Tel (908) 532-4359 Fax (908) 532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

[illegible]



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703

Tel (908)532-4359 Fax (908)532-3484 EMail: appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: <u>Joe Fallon</u>		Project No: <u>516 CW-7</u>		Analysis Parameters		Comments:
Phone #: <u>X26223</u>	Location: <u>Bldg. 200</u>	Sample #	Type	Time	Date	
Lab Sample I.D.	Sample Location	Sample #	Type	Time	Date	Remarks / Preservation Method
3179.01	P 48"-54"	1	Soil	246PM	11/23/97	LOC
.02	P 48"-54"			249PM	11/23/97	
.03	R 48"-54"			252PM	11/23/97	
.04	S 48"-54"			255PM	11/23/97	
.05	T 48"-54"			259PM	11/23/97	
.06	U 48"-54"			302PM	11/23/97	
.07	V1 0-6"			305PM	11/23/97	
.08	V2 48"-54"			308PM	11/23/97	
Relinquished by (signature): <u>Joe Fallon</u> Date/Time: <u>11/23/97 1:30PM</u> Received by (signature): <u>J. Vengura</u> Date/Time: <u></u>						
Relinquished by (signature): <u></u> Date/Time: <u></u> Received by (signature): <u></u> Date/Time: <u></u>						

Report Type: () Full, () Reduced, () Standard, () Screen / non-certified
Turnaround time: () Standard 4 wks, () Rush _____ Days, () ASAP Verbal _____ Hrs.

Remarks:



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELF-M-PW-EV, Fort Monmouth, NJ 07703

Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: Joe Fallon		Project No: 5-4 CW-7		Analysis Parameters		Comments:	
Phone #: X21223		Location: Bldg 2000					
XDERA () OMA () Other:							
Samplers Name / Company: Joe Fallon / ORN		Sample #					
Lab Sample I.D.	Sample Location	Date	Type	bottles			Remarks / Preservation Method
3182-01	W 24"-30"	11/24/97	23:00 PM	1			ICE
02	X 24"-30"		23:30 PM	1			2400
03	Y 24"-30"		23:30 PM				
04	Z 24"-30"		23:30 PM				
05	AA 24"-30"		24:20 PM				
06	BB 24"-30"		24:50 PM				
07	CC 24"-30"		24:50 PM				
08	DD 24"-30"		25:00 PM				
09	EE 0-6"		25:20 PM				
10	EE2 24"-30"		25:40 PM				
11	FF 24"-30"		25:50 PM				
12	GG 24"-30"		25:50 PM				
13	HH 24"-30"		3:00 PM				
14	II 0-6"		3:03 PM	1			
Relinquished by (signature): Joe Fallon		Received by (signature): Joe Fallon		Relinquished by (signature):		Received by (signature):	
Date/Time: 11/24/97 4:00 PM		Date/Time: 11/24/97 4:00 PM		Date/Time:		Date/Time:	
Relinquished by (signature):		Received by (signature):		Relinquished by (signature):		Received by (signature):	
Date/Time:		Date/Time:		Date/Time:		Date/Time:	
Report Type: () Full, () Reduced, () Standard, () Screen / non-certified							
Turnaround time: () Standard 4 wks, () Rush Days, () ASAP Verbal Hrs.							
Remarks:							

Tel (908) 532-4359 Fax (908) 532-3484 EMail: appleby@doim6.monmouth.army.mil

Chain of Custody Record

[illegible]

Drugs, 1/3, SELLING W-LV, 101 Monmouth, NY 07030
Tel (908) 532-4359 Fax (908) 532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: JOE FALLON - DPW		Project No: 97-1148		Analysis Parameters		Comments:
Phone #: 26223		Location: B. 200D				
XADERA () OMA () Other:						
Samplers Name / Company : GARY DIMARTINO - TUS						
Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	Remarks / Preservation Method
3294. 01	A1	1-27-98	0938	Soil	1	* = SAMPLES KEPT BELOW 4°C
	A2					
	A3					
	A4					
	B1					
	B2					
	B3					
	B4					
	C1					
	C2					
	C3					
	C4					
	D1					
	D2					
Relinquished by (signature): [Signature]		Received by (signature): [Signature]		Relinquished by (signature): [Signature]		Received by (signature): [Signature]
Date/Time: 1/27/98 11:10		Date/Time: 1/27/98 12:57		Date/Time:		Date/Time:
Relinquished by (signature): [Signature]		Received by (signature): [Signature]		Relinquished by (signature): [Signature]		Received by (signature): [Signature]
Date/Time:		Date/Time:		Date/Time:		Date/Time:
Report Type: () Full, () Reduced, () Standard, () Screen / non-certified						
Turnaround time: () Standard 4 wks., () Rush Days, () ASAP Verbal Hrs.						

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703

Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: JOE FALLON-DPW		Project No: 97-1148		Analysis Parameters		Comments: * = SAMPLES KEPT BELOW 4°C.	
Phone #: 26223		Location: B. 2000					
XADERA () OMA () Other:		Sample Name / Company: GARY DIMARTINIS-TVS		PCB'S		Remarks / Preservation Method	
Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles		
3249.15	D3	1-27-98	1257	SOIL	1	* ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	
16	D4		1347				
17	E1						
18	E2						
19	E3						
20	E4						
21	F1		1431				
22	F2						
23	F3						
24	F4						
25	G1						
26	G2		1515				
27	G3						
28	G4						
Relinquished by (signature):		Received by (signature):		Relinquished by (signature):			Received by (signature):
Date/Time: 1/28/98 1110		Date/Time: 1/28/98 1110		Date/Time:			Date/Time:
Relinquished by (signature):		Received by (signature):		Relinquished by (signature):		Received by (signature):	
Date/Time:		Date/Time:		Date/Time:		Date/Time:	
Report Type: () Full, () Reduced, () Standard, () Screen / non-certified				Remarks:			
Turnaround time: () Standard 4 wks, () Rush Days, () ASAP Verbal Hrs.							

NJDEP Certification #13461

[illegible]

Bldg. 173. SELFM-PW-EV, Fort Monmouth, NJ 07703

Tel (732) 532-4359 Fax (732) 532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

[illegible]

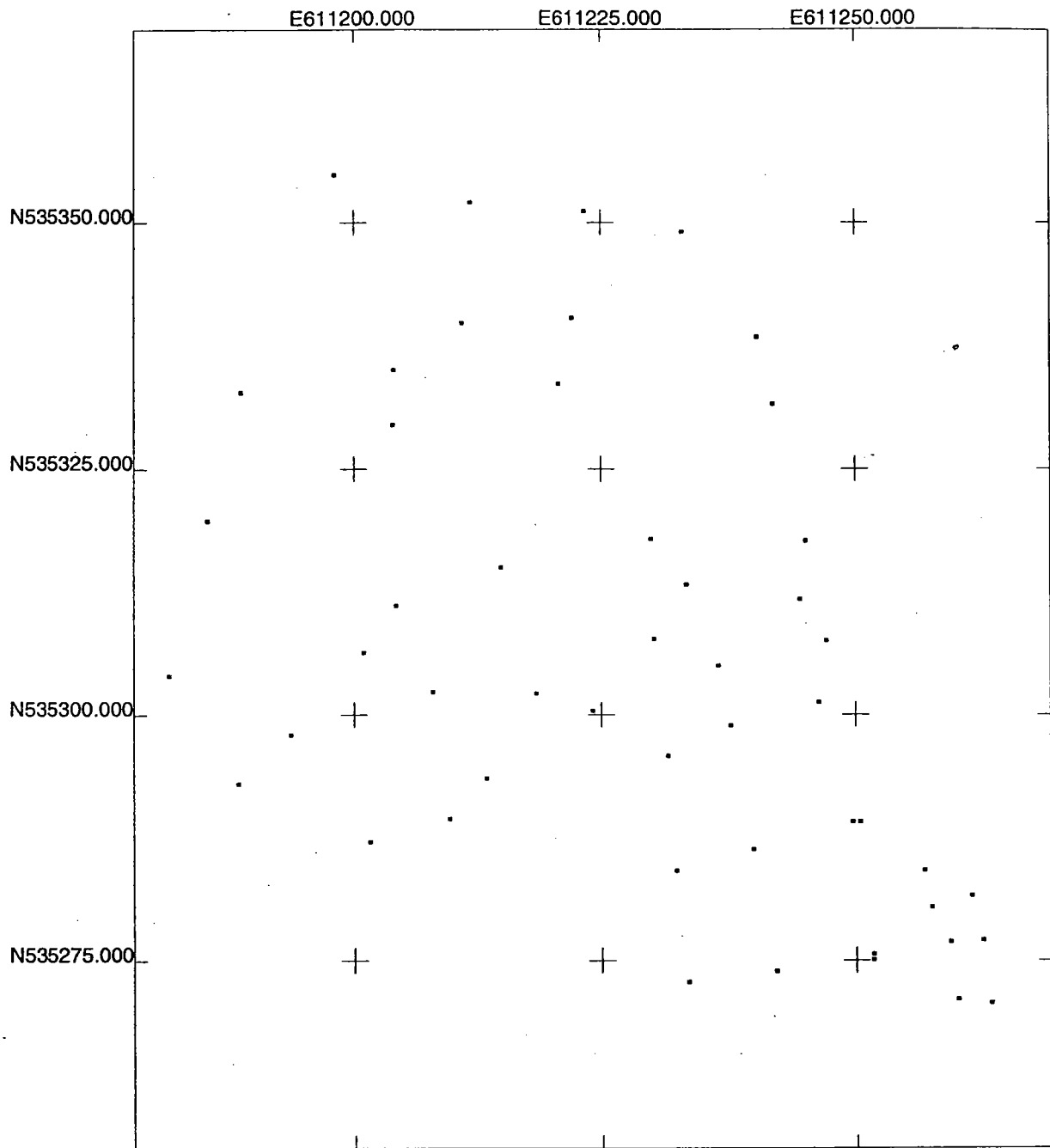
Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

[illegible]

GPS MAPS



CW-7 Bldg. 2000 Officer Club GPS Location Map

US State Plane 1983
New Jersey (NY East) 2900
NAD 1983 (Conus)



Scale 1:200
0 25.00
US Survey Feet

officersclubcombo.cor
2/8/2000
Pathfinder Office
 **Trimble**

CW-7 BLDG. 2000 OFFICER CLUB GPS POSITION & COORDINATES

US STATE PLANE 1983 NJ (NY EAST) 2900 NAD 1983 (CONUS)

(IN US SURVEY FEET)

SAMPLE POINTS

<u>POSITION / DESC.</u>	<u>Y COORD. (NORTHING)</u>	<u>X COORD. (EASTING)</u>
A	535270.748	611263.249
A1, A2	535275.67	611251.623
A3	535275.14	611251.585
AA	535304.031	611181.657
B	535271.116	611259.939
B1, B2	535289.161	611249.635
B3	535289.162	611250.36
BB	535319.794	611185.495
C	535277.096	611262.46
C1, C2	535301.332	611246.322
CC	535329.545	611203.76
D (FROM 1/27/98)	535276.943	611259.199
D	535273.998	611242.072
DD	535333.705	611220.622
E	535286.317	611239.843
E (FROM 1/27/98)	535281.595	611261.311
EE	535331.657	611241.824
F	535298.952	611237.637
F (FROM 1/27/98)	535280.474	611257.408
FF	535335.135	611203.866
G (FROM 1/27/98)	535284.185	611256.672
G	535272.871	611233.427
GG	535352.096	611211.626
H	535284.147	611232.3
HH	535340.368	611222.03
I	535295.869	611231.466
II	535351.224	611223.286
J	535293.575	611213.218
JJ	535354.916	611198.033
K	535289.46	611209.406
KK	535332.839	611188.832
L	535287.087	611201.492
LL	535338.411	611240.256
M	535298.013	611193.746
N	535306.344	611200.874
O	535302.366	611207.764
P	535315.048	611214.711
Q	535300.452	611224.074

R	535305.004	611236.465
S	535307.563	611247.073
T	535313.277	611233.306
U	535307.727	611230.088
V1, V2	535317.727	611245.034
W	535311.8	611244.489
X	535317.936	611229.826
Y	535311.139	611204.081
Z	535293.048	611188.54

REFERENCE POSITIONS

<u>POSITION / DESC.</u>	<u>Y COORD. (NORTHING)</u>	<u>X COORD. (EASTING)</u>
TRANSFRMR CTR	535302.239	611218.323
MANHOLE	535339.857	611210.732
MWR SIGN	535349.129	611232.943

CASE NARRATIVE

CASE NARRATIVE

Site: CW-7 PCB Investigation

The Field Duplicate for samples taken on 1/27/98 is C4 36-42" (Lab ID 3299.12).

ANALYTICAL RESULTS

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3165
Sample Received: 11/19/97
Analysis Start: 11/31/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3165.01 2000-A2 96"-102"	3165.02 2000-B2 96"-102"	3165.03 2000-C2 96"-102"	3165.04 2000-D 96"-102"	3165.05 2000-E 96"-102"
1016	0.05	ND	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND	ND
1260	0.05	ND	ND	ND	ND	ND
Total PCB	0.35	ND	ND	ND	ND	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3165
Sample Received: 11/19/97
Analysis Start: 11/31/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3165.06 2000-F 96"-102"				
1016	0.05	ND				
1221	0.05	ND				
1232	0.05	ND				
1242	0.05	ND				
1248	0.05	ND				
1254	0.05	ND				
1260	0.05	ND				
Total PCB	0.35	ND				

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3168
Sample Received: 11/21/97
Analysis Start: 11/31/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3168.01 A1 0-6"	3168.02 B1 0-6"	3168.03 C1 0-6"	3168.04 G 72"-78"	3168.05 H 72"-78"
1016	0.05	ND	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND	ND
1260	0.05	24.9	ND	ND	47.5	ND
Total PCB	0.35	24.9 ✓	ND	ND	47.5 ✓	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3168
Sample Received: 11/21/97
Analysis Start: 11/31/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3168.06 I 72"78"				
1016	0.05	ND				
1221	0.05	ND				
1232	0.05	ND				
1242	0.05	ND				
1248	0.05	ND				
1254	0.05	ND				
1260	0.05	ND				
Total PCB	0.35	ND				

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3178
Sample Received: 11/25/97
Analysis Start: 12/02/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3178.01 J 48"-54"	3178.02 K 48"-54"	3178.03 L 48"-54"	3178.04 M 48"-54"	3178.05 N 48"-54"
1016	0.05	ND	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND	ND
1260	0.05	ND	ND	ND	3.86	0.29
Total PCB	0.35	ND	ND	ND	3.86 ✓	0.29 ✓

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3178
Sample Received: 11/25/97
Analysis Start: 12/02/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3178.06 O 48"-54"				
1016	0.05	ND				
1221	0.05	ND				
1232	0.05	ND				
1242	0.05	ND				
1248	0.05	ND				
1254	0.05	ND				
1260	0.05	0.81				
Total PCB	0.35	0.81				

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3179
Sample Received: 11/25/97
Analysis Start: 12/02/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3179.01 P 48"-54"	3179.02 Q 48"-54"	3179.03 R 48"-54"	3179.04 S 48"-54"	3179.05 T 48"-54"
1016	0.05	ND	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND	ND
1260	0.05	0.76	0.22	ND	ND	0.11
Total PCB	0.35	0.76	0.22	ND	ND	0.11

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3179
Sample Received: 11/25/97
Analysis Start: 12/02/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3179.06 U 48"-54"	3179.07 V1 0-6"	3179.08 V2 48"-54"		
1016	0.05	ND	ND	ND		
1221	0.05	ND	ND	ND		
1232	0.05	ND	ND	ND		
1242	0.05	ND	ND	ND		
1248	0.05	ND	ND	ND		
1254	0.05	ND	ND	ND		
1260	0.05	ND	0.06	ND		
Total PCB	0.35	ND	0.06	ND		

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3182
Sample Received: 11/25/97
Analysis Start: 12/02/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3182.01 W 24"-30"	3182.02 X 24"-30"	3182.03 Y 24"-30"	3182.04 Z 24"-30"	3182.05 AA 24"-30"
1016	0.05	ND	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND	ND
1260	0.05	ND	0.86	ND	0.11	0.28
Total PCB	0.35	ND	0.86 ✓	ND	0.11 ✓	0.28 ✓

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3182
Sample Received: 11/25/97
Analysis Start: 12/02/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3182.06 BB 24"-30"	3182.07 CC 24"-30"	3182.08 DD 24"-30"	3182.09 EE1 0-6"	3182.10 EE2 24"-30"
1016	0.05	ND	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND	ND
1260	0.05	ND	ND	0.61	0.43	ND
Total PCB	0.35	ND	ND	0.61	0.43	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3182
Sample Received: 11/25/97
Analysis Start: 12/02/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3182.11 FF 24"-30"	3182.12 GG 24"-30"	3182.13 HH 24"-30"	3182.14 II 0-6"	3182.15 JJ 0-6"
1016	0.05	ND	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND	ND
1260	0.05	ND	ND	ND	ND	ND
Total PCB	0.35	ND	ND	ND	ND	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3182
Sample Received: 11/25/97
Analysis Start: 12/02/97
Analysis Completed: 12/10/97

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3182.16 KK 0-6"	3182.17 LL 0-6"			
1016	0.05	ND	ND			
1221	0.05	ND	ND			
1232	0.05	ND	ND			
1242	0.05	ND	ND			
1248	0.05	ND	ND			
1254	0.05	ND	ND			
1260	0.05	ND	ND			
Total PCB	0.35	ND	ND			

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3299
Sample Received: 01/27/98
Analysis Start: 01/29/98
Analysis Completed: 02/01/98

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3299.05 B1 0-6"	3299.06 B2 12"-18"	3299.07 B3 24"-30"	3299.08 B4 36"-42"
1016	0.05	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND
1260	0.05	ND	ND	ND	ND
Total PCB	0.35	ND	ND	ND	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3299
Sample Received: 01/27/98
Analysis Start: 01/29/98
Analysis Completed: 02/01/98

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3299.09 C1 0-6"	3299.10 C2 12"-18"	3299.11 C3 24"-30"	3299.12 C4 36"-42"
1016	0.05	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND
1260	0.05	ND	ND	ND	ND
Total PCB	0.35	ND	ND	ND	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3299
Sample Received: 01/27/98
Analysis Start: 01/29/98
Analysis Completed: 02/01/98

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3299.13 D1 0-6"	3299.14 D2 12"-18"	3299.15 D3 24"-30"	3299.16 D4 36"-42"
1016	0.05	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND
1260	0.05	ND	ND	ND	ND
Total PCB	0.35	ND	ND	ND	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3299
Sample Received: 01/27/98
Analysis Start: 01/29/98
Analysis Completed: 02/01/98

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3299.17 E1 0-6"	3299.18 E2 12"-18"	3299.19 E3 24"-30"	3299.20 E4 36"-42"
1016	0.05	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND
1260	0.05	ND	ND	ND	ND
Total PCB	0.35	ND	ND	ND	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3299
Sample Received: 01/27/98
Analysis Start: 01/29/98
Analysis Completed: 02/01/98

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3299.21 F1 0-6"	3299.22 F2 12"-18"	3299.23 F3 24"-30"	3299.24 F4 36"-42"
1016	0.05	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND
1260	0.05	ND	ND	ND	ND
Total PCB	0.35	ND	ND	ND	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3299
Sample Received: 01/27/98
Analysis Start: 01/29/98
Analysis Completed: 02/01/98

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3299.25 G1 0-6"	3299.26 G2 12"-18"	3299.27 G3 24"-30"	3299.28 G4 36"-42"
1016	0.05	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND
1260	0.05	ND	ND	ND	ND
Total PCB	0.35	ND	ND	ND	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3299
Sample Received: 01/27/98
Analysis Start: 01/29/98
Analysis Completed: 02/02/98

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3299.29 DUP
1016	0.05	ND
1221	0.05	ND
1232	0.05	ND
1242	0.05	ND
1248	0.05	ND
1254	0.05	ND
1260	0.05	ND
Total PCB	0.35	ND

ND = None Detected
MDL = Method Detection Limit
Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3299
Sample Received: 01/27/98
Analysis Start: 01/29/98
Analysis Completed: 02/02/98

Site: Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-608
Matrix: Aqueous

ANALYTICAL RESULTS SUMMARY

PCB Arochlor	MDL (ug/L)	3299.30 FB
1016	.11	ND
1221	.21	ND
1232	.14	ND
1242	.16	ND
1248	.06	ND
1254	.04	ND
1260	.04	ND
Total PCB		ND

ND = None Detected

MDL = Method Detection Limit

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3326
Sample Received: 02/09/98
Analysis Start: 02/11/98
Analysis Completed: 02/20/98

Site: CW-7
Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3326.01 G-2 144"-150"	3326.02 H-2 144"-150"
1016	0.05	ND	ND
1221	0.05	ND	ND
1232	0.05	ND	ND
1242	0.05	ND	ND
1248	0.05	ND	ND
1254	0.05	ND	ND
1260	0.05	ND	ND
Total PCB	0.35	ND	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3330
Sample Received: 02/10/98
Analysis Start: 02/11/98
Analysis Completed: 02/20/98

Site: CW-7
Bldg. 2000
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3330.01 A3 0-6"	3330.02 B3 0-6"
1016	0.05	ND	ND
1221	0.05	ND	ND
1232	0.05	ND	ND
1242	0.05	ND	ND
1248	0.05	ND	ND
1254	0.05	ND	ND
1260	0.05	ND	ND
Total PCB	0.35	ND	ND

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis

APPENDIX I

**UST Disposal Documentation
Mazza & Sons, Inc., Tinton Falls, NJ, 19 November 1997**

Customer

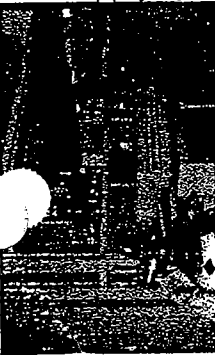
APPENDIX J

Soil Stockpile – Waste Characterization

Analytical Data Package

Fort Monmouth Environmental Testing Laboratory – Analytical Data Report

Project CW-7, Lab ID #:3367, 3 March 1998



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703

Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

Customer: JOE FALLON		Project No: CW-7		Analysis Parameters				Comments:					
Phone #: 26223		Location: SOIL PILE											
() DERA () JOMA () Other:													
Samplers Name / Company:		Sample #											
Lab Sample I.D.	Sample Location	Date	Time	Type	bottles								
3367.01	SP-1	2-26-98	0900	soil	2	THC	PCB	Reactivity	TOX	Methyls, Vol	Sem. Vol	Pest/HAB	
02	SP-2		0905		2			X	X	X	X	X	3367.01-03
03	SP-3		0910		2								
04	SP-4		0915		2								
05	SP-5		0920		2			X	X	X	X	X	3367.04-06
06	SP-6		0925		2								
07	SP-7		0935		2			X	X	X	X	X	3367.07-09
08	SP-8		0940		2								
09	SP-9		0945		2								
10	SP-10		0950		2								
11	SP-11		0955		2			X	X	X	X	X	3367.10-13
12	SP-12		1000		2								
13	SP-13		0930		2								
14	FIELD DUP.		1005	✓	2								
Relinquished by (signature): Mark Fallon		Date/Time: 2-26-98 10:30		Received by (signature): J. Appleby		Relinquished by (signature):		Date/Time:		Received by (signature):			
Relinquished by (signature):		Date/Time:		Received by (signature):		Relinquished by (signature):		Date/Time:		Received by (signature):			
Report Type: () Full, () Reduced, () Standard, () Screen / non-certified													
Turnaround time: () Standard 4 wks, () Rush Days, () ASAP Verbal Hrs.													
Remarks:													

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3367
Sample Received: 02/26/98
Analysis Start: 03/05/98
Analysis Completed: 03/12/98

Site: CW-7 Soil Pile
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3367.01 SP-1	3367.02 SP-2	3367.03 SP-3	3367.04 SP-4
1016	0.05	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND
1260	0.05	0.12	1.92	0.15	1.76
Total PCB	0.35	0.12	1.92	0.15	1.76

ND = None Detected
MDL = Method Detection Limit
Results are Reported on a Dry Wt.Basis


Daniel K. Wright
Laboratory Director

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3367
Sample Received: 02/26/98
Analysis Start: 03/05/98
Analysis Completed: 03/12/98

Site: CW-7 Soil Pile
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3367.05 SP-5	3367.06 SP-6	3367.07 SP-7	3367.08 SP-8
1016	0.05	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND
1260	0.05	14.2	4.10	2.11	0.47
Total PCB	0.35	14.2	4.10	2.11	0.47

ND = None Detected
MDL = Method Detection Limit
Results are Reported on a Dry Wt.Basis


Daniel K. Wright
Laboratory Director

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3367
Sample Received: 02/26/98
Analysis Start: 03/05/98
Analysis Completed: 03/12/98

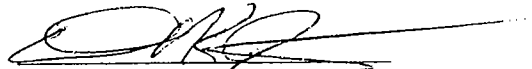
Site: CW-7 Soil Pile
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3367.09 SP-9	3367.10 SP-10	3367.11 SP-11	3367.12 SP-12
1016	0.05	ND	ND	ND	ND
1221	0.05	ND	ND	ND	ND
1232	0.05	ND	ND	ND	ND
1242	0.05	ND	ND	ND	ND
1248	0.05	ND	ND	ND	ND
1254	0.05	ND	ND	ND	ND
1260	0.05	3.85	1.18	0.22	1.27
Total PCB	0.35	3.85	1.18	0.22	1.27

ND = None Detected
MDL = Method Detection Limit
Results are Reported on a Dry Wt.Basis


Daniel K. Wright
Laboratory Director

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3367
Sample Received: 02/26/98
Analysis Start: 03/05/98
Analysis Completed: 03/12/98

Site: CW-7 Soil Pile
Ft. Monmouth, NJ

Method: EPA-SW846-8080
Matrix: Soil

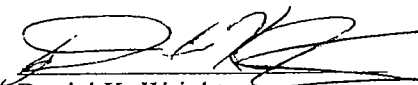
ANALYTICAL RESULTS SUMMARY

PCB Arochlor (mg/Kg)	MDL (mg/Kg)	3367.13 SP-13	3367.14 Field DUP		
1016	0.05	ND	ND		
1221	0.05	ND	ND		
1232	0.05	ND	ND		
1242	0.05	ND	ND		
1248	0.05	ND	ND		
1254	0.05	ND	ND		
1260	0.05	1.50	ND		
Total PCB	0.35	1.50	ND		

ND = None Detected

MDL = Method Detection Limit

Results are Reported on a Dry Wt.Basis


Daniel K. Wright
Laboratory Director

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3367
Sample Received: 02/26/98
Sample Matrix: Soil

Site: Site-A
Ft. Monmouth, New Jersey

TEST PARAMETER: IGNITABILITY
TEST METHOD: SW-846 1010 - Pensky-Martens Closed Cup

Laboratory ID#	Sample Location/ Identification	Flashpoint deg. F
3367.01-03	Composite	> 140
3367.04-06	Composite	> 140
3367.07-09	Composite	> 140
3367.10-13	Composite	> 140

NA - Not Applicable


Daniel K. Wright
Laboratory Director

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3367
Sample Received: 02/26/98
Analysis Start: 03/12/97
Analysis Completed: 03/12/97

Site: CW-7, Soil Pile
Ft. Monmouth, New Jersey

TEST PARAMETER: pH
TEST METHOD: EPA SW-846 - 9045

Laboratory ID#	Sample Location/ Identification	pH
3367.01-03	Composite	5.23
3367.04-06	Composite	5.39
3367.07-09	Composite	5.14
3367.10-13	Composite	5.40


Daniel K. Wright
Laboratory Director

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Volatiles - BTEX
CW-7
Soil Pile
Composite

Project # 3367
Date Rec. 02/26/98
Date Compl. 03/12/98
Released by:



Daniel K. Wright
Laboratory Director

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

VBK31

Lab Name: FMETL NJDEP # 13461

Project: _____ Case No.: 3367 Location: CW7 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: VBK31

Sample wt/vol: 5.0 (g/ml) G Lab File ID: V03130.D

Level: (low/med) LOW Date Received: 02/26/98

% Moisture: not dec. 0 Date Analyzed: 03/12/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	2	U
1330-20-7	m+p-Xylenes	3	U
1330-20-7	o-Xylene	2	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

SP1-3

Lab Name: FMETL NJDEP # 13461

Project: _____ Case No.: 3367 Location: CW7 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3367Comp1

Sample wt/vol: 5.0 (g/ml) G Lab File ID: V03131.D

Level: (low/med) LOW Date Received: 02/26/98

% Moisture: not dec. 22.8 Date Analyzed: 03/12/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	3	U
1330-20-7	m+p-Xylenes	4	U
1330-20-7	o-Xylene	3	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

SP4-6

Lab Name: FMETL NJDEP # 13461

Project: _____ Case No.: 3367 Location: CW7 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3367Comp2

Sample wt/vol: 5.0 (g/ml) G Lab File ID: V03132.D

Level: (low/med) LOW Date Received: 02/26/98

% Moisture: not dec. 17.5 Date Analyzed: 03/12/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	2	U
1330-20-7	m+p-Xylenes	4	U
1330-20-7	o-Xylene	2	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

SP10-13

Lab Name: FMETL NJDEP # 13461

Project: _____ Case No.: 3367 Location: CW7 SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 3367Comp4

Sample wt/vol: 5.0 (g/ml) G Lab File ID: V03134.D

Level: (low/med) LOW Date Received: 02/26/98

% Moisture: not dec. 7.2 Date Analyzed: 03/12/98

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

71-43-2	Benzene	1	U
108-88-3	Toluene	1	U
100-41-4	Ethylbenzene	2	U
1330-20-7	m+p-Xylenes	3	U
1330-20-7	o-Xylene	2	U

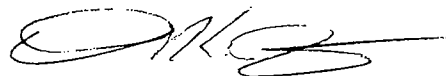
US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Volatiles - TCLP
CW-7
Soil Pile
Composite

Project # 3367
Date Rec. 02/26/98
Date Compl. 03/24/98
Released by:



Daniel K. Wright
Laboratory Director

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Volatiles - TCLP
CW-7
Soil Pile
Composite

Project # 3367
Date Rec. 02/26/98
Date Compl. 03/24/98
Released by:



Daniel K. Wright
Laboratory Director

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name V03318.D
 Operator Skelton
 Date Acquired 24 Mar 1998 9:24

Sample Name VBLK38
 Field ID VBLK38
 Sample Multiplier 1

CAS#	Name	R.T.	Response	Result	Regulatory Level	MDL	Qualifiers		
75-01-4	Vinyl Chloride			not detected	0.2	0.0026 mg/L			
75-35-4	1,1-Dichloroethene			not detected	0.7	0.0007 mg/L			
78-93-3	2-Butanone			not detected	200.0	0.0021 mg/L			
67-66-3	Chloroform			not detected	6.0	0.0004 mg/L			
56-23-5	Carbon Tetrachloride			not detected	0.5	0.0012 mg/L			
71-43-2	Benzene			not detected	0.5	0.0005 mg/L			
107-06-2	1,2-Dichloroethane			not detected	0.5	0.0013 mg/L			
79-01-6	Trichloroethene			not detected	0.5	0.0009 mg/L			
127-18-4	Tetrachloroethene			not detected	0.7	0.0009 mg/L			
108-90-7	Chlorobenzene			not detected	100.0	0.0007 mg/L			

Qualifiers

B = Compound in related blank
 E = Value above linear range
 D = Value from dilution
 MDL = Method detection limit
 R.T. = Retention time

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name v03333.d
 Operator Skelton
 Date Acquired 24 Mar 1998 20:03

Sample Name 3367.01-03
 Field ID Comp1
 Sample Multiplier 1

CAS#	Name	R.T.	Response	Result	Regulatory Level	MDL	Qualifiers		
75-01-4	Vinyl Chloride			not detected	0.2	0.0026 mg/L			
75-35-4	1,1-Dichloroethene			not detected	0.7	0.0007 mg/L			
78-93-3	2-Butanone			not detected	200.0	0.0021 mg/L			
67-66-3	Chloroform			not detected	6.0	0.0004 mg/L			
56-23-5	Carbon Tetrachloride			not detected	0.5	0.0012 mg/L			
71-43-2	Benzene			not detected	0.5	0.0005 mg/L			
107-06-2	1,2-Dichloroethane			not detected	0.5	0.0013 mg/L			
79-01-6	Trichloroethene			not detected	0.5	0.0009 mg/L			
127-18-4	Tetrachloroethene			not detected	0.7	0.0009 mg/L			
108-90-7	Chlorobenzene			not detected	100.0	0.0007 mg/L			

Qualifiers

B = Compound in related blank
 E = Value above linier range
 D = Value from dilution
 MDL = Method detection limit
 R.T. = Retention time

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name v03334.d
 Operator Skelton
 Date Acquired 24 Mar 1998 20:46

Sample Name 3367.04-06
 Field ID Comp2
 Sample Multiplier 1

CAS#	Name	R.T.	Response	Result	Regulatory Level	MDL	Qualifiers		
75-01-4	Vinyl Chloride			not detected	0.2	0.0026 mg/L			
75-35-4	1,1-Dichloroethene			not detected	0.7	0.0007 mg/L			
78-93-3	2-Butanone			not detected	200.0	0.0021 mg/L			
67-66-3	Chloroform			not detected	6.0	0.0004 mg/L			
56-23-5	Carbon Tetrachloride			not detected	0.5	0.0012 mg/L			
71-43-2	Benzene			not detected	0.5	0.0005 mg/L			
107-06-2	1,2-Dichloroethane			not detected	0.5	0.0013 mg/L			
79-01-6	Trichloroethene			not detected	0.5	0.0009 mg/L			
127-18-4	Tetrachloroethene			not detected	0.7	0.0009 mg/L			
108-90-7	Chlorobenzene			not detected	100.0	0.0007 mg/L			

Qualifiers

B = Compound in related blank
 E = Value above linier range
 D = Value from dilution
 MDL = Method detection limit
 R.T. = Retention time

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name v03336.d
 Operator Skelton
 Date Acquired 24 Mar 1998 22:11

Sample Name 3367.10-13
 Field ID Comp4
 Sample Multiplier 1

CAS#	Name	R.T.	Response	Result	Regulatory Level	MDL	Qualifiers		
75-01-4	Vinyl Chloride			not detected	0.2	0.0026 mg/L			
75-35-4	1,1-Dichloroethene			not detected	0.7	0.0007 mg/L			
78-93-3	2-Butanone			not detected	200.0	0.0021 mg/L			
67-66-3	Chloroform			not detected	6.0	0.0004 mg/L			
56-23-5	Carbon Tetrachloride			not detected	0.5	0.0012 mg/L			
71-43-2	Benzene			not detected	0.5	0.0005 mg/L			
107-06-2	1,2-Dichloroethane			not detected	0.5	0.0013 mg/L			
79-01-6	Trichloroethene			not detected	0.5	0.0009 mg/L			
127-18-4	Tetrachloroethene			not detected	0.7	0.0009 mg/L			
108-90-7	Chlorobenzene			not detected	100.0	0.0007 mg/L			

Qualifiers

B = Compound in related blank
 E = Value above linear range
 D = Value from dilution
 MDL = Method detection limit
 R.T. = Retention time

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Project: Semi-Volatiles - TCLP
CW-7
Soil Pile
Composite

Project # 3367
Date Rec. 02/26/98
Date Compl. 03/27/98
Released by:



Daniel K. Wright
Laboratory Director

Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Na **bn1204.d**
 Operator **FITZPATRICK**
 Date Acquire **03/27/98 13:11**

Sample Name **SBLK 40**
 Misc Info **SBLK 40**
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (mg/L)	MDL	Qualifiers
110-86-1	Pyridine			not detected	5.00	5.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	7.50	0.23 ug/L	
	2-Methylphenol (o-cresol)			not detected	200.00	0.14 ug/L	
	4-Methylphenol (m,p-cresol)			not detected	200.00	0.14 ug/L	
67-72-1	Hexachloroethane			not detected	3.00	0.33 ug/L	
98-95-3	Nitrobenzene			not detected	2.00	0.46 ug/L	
87-68-3	Hexachlorobutadiene			not detected	0.50	0.38 ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	2.00	0.42 ug/L	
	2,4,5-Trichlorophenol			not detected	400.00	0.31 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	0.13	0.36 ug/L	
118-74-1	Hexachlorobenzene			not detected	0.13	0.82 ug/L	
87-86-5	Pentachlorophenol			not detected	100.00	1.08 ug/L	

Qualifiers

E = Value exceeded linear range
 D = Value from dilution
 B = Compound in related blank
 MDL = Method Detection Limit
 R.T. = Retention Time

Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Na **bn1206.d**
 Operator **FITZPATRICK**
 Date Acquire **03/27/98 14:43**

Sample Name **TCLP BLANK**
 Misc Info **TCLP BLANK**
 Sample Multiplier **10**

CAS#	Name	R.T.	Response	Result	Regulatory Level (mg/L)	MDL	Qualifiers
110-86-1	Pyridine			not detected	5.00	5.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	7.50	0.23 ug/L	
	2-Methylphenol (o-cresol)			not detected	200.00	0.14 ug/L	
	4-Methylphenol (m,p-cresol)			not detected	200.00	0.14 ug/L	
67-72-1	Hexachloroethane			not detected	3.00	0.33 ug/L	
98-95-3	Nitrobenzene			not detected	2.00	0.46 ug/L	
87-68-3	Hexachlorobutadiene			not detected	0.50	0.38 ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	2.00	0.42 ug/L	
	2,4,5-Trichlorophenol			not detected	400.00	0.31 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	0.13	0.36 ug/L	
118-74-1	Hexachlorobenzene			not detected	0.13	0.82 ug/L	
87-86-5	Pentachlorophenol			not detected	100.00	1.08 ug/L	

Qualifiers

E = Value exceeded linear range
 D = Value from dilution
 B = Compound in related blank
 MDL = Method Detection Limit
 R.T. = Retention Time

Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Na bn1209.d
 Operator FITZPATRICK
 Date Acquire 03/27/98 17:05

Sample Name 3367.01-03
 Misc Info SP1-3
 Sample Multiplier 10

CAS#	Name	R.T.	Response	Result	Regulatory Level (mg/L)	MDL	Qualifiers
110-86-1	Pyridine			not detected	5.00	5.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	7.50	0.23 ug/L	
	2-Methylphenol (o-cresol)			not detected	200.00	0.14 ug/L	
	4-Methylphenol (m,p-cresol)			not detected	200.00	0.14 ug/L	
67-72-1	Hexachloroethane			not detected	3.00	0.33 ug/L	
98-95-3	Nitrobenzene			not detected	2.00	0.46 ug/L	
87-68-3	Hexachlorobutadiene			not detected	0.50	0.38 ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	2.00	0.42 ug/L	
	2,4,5-Trichlorophenol			not detected	400.00	0.31 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	0.13	0.36 ug/L	
118-74-1	Hexachlorobenzene			not detected	0.13	0.82 ug/L	
87-86-5	Pentachlorophenol			not detected	100.00	1.08 ug/L	

Qualifiers

E = Value exceded linear range
 D = Value from dilution
 B = Compound in related blank
 MDL = Method Detection Limit
 R.T. = Retention Time

Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Na **bn1210.d**
Operator **FITZPATRICK**
Date Acquire **03/27/98 17:50**

Sample Name **3367.04-06**
Misc Info **SP4-6**
Sample Multiplier **10**

CAS#	Name	R.T.	Response	Result	Regulatory Level (mg/L)	MDL	Qualifiers
110-86-1	Pyridine			not detected	5.00	5.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	7.50	0.23 ug/L	
	2-Methylphenol (o-cresol)			not detected	200.00	0.14 ug/L	
	4-Methylphenol (m,p-cresol)			not detected	200.00	0.14 ug/L	
67-72-1	Hexachloroethane			not detected	3.00	0.33 ug/L	
98-95-3	Nitrobenzene			not detected	2.00	0.46 ug/L	
87-68-3	Hexachlorobutadiene			not detected	0.50	0.38 ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	2.00	0.42 ug/L	
	2,4,5-Trichlorophenol			not detected	400.00	0.31 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	0.13	0.36 ug/L	
118-74-1	Hexachlorobenzene			not detected	0.13	0.82 ug/L	
87-86-5	Pentachlorophenol			not detected	100.00	1.08 ug/L	

Qualifiers

E = Value exceeded linear range
D = Value from dilution
B = Compound in related blank
MDL = Method Detection Limit
R.T. = Retention Time

Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Na bn1211.d
 Operator FITZPATRICK
 Date Acquire 03/27/98 18:36

Sample Name 3367.07-09
 Misc Info SP7-9
 Sample Multiplier 10

CAS#	Name	R.T.	Response	Result	Regulatory Level (mg/L)	MDL	Qualifiers
110-86-1	Pyridine			not detected	5.00	5.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	7.50	0.23 ug/L	
	2-Methylphenol (o-cresol)			not detected	200.00	0.14 ug/L	
	4-Methylphenol (m,p-cresol)			not detected	200.00	0.14 ug/L	
67-72-1	Hexachloroethane			not detected	3.00	0.33 ug/L	
98-95-3	Nitrobenzene			not detected	2.00	0.46 ug/L	
87-68-3	Hexachlorobutadiene			not detected	0.50	0.38 ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	2.00	0.42 ug/L	
	2,4,5-Trichlorophenol			not detected	400.00	0.31 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	0.13	0.36 ug/L	
118-74-1	Hexachlorobenzene			not detected	0.13	0.82 ug/L	
87-86-5	Pentachlorophenol			not detected	100.00	1.08 ug/L	

Qualifiers

E = Value exceeded linear range
 D = Value from dilution
 B = Compound in related blank
 MDL = Method Detection Limit
 R.T. = Retention Time

Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Na BN1213.D
 Operator FITZPATRICK
 Date Acquire 03/27/98 19:21

Sample Name 3367.10-13
 Misc Info SP10-13
 Sample Multiplier 10

CAS#	Name	R.T.	Response	Result	Regulatory Level (mg/L)	MDL	Qualifiers
110-86-1	Pyridine			not detected	5.00	5.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	7.50	0.23 ug/L	
	2-Methylphenol (o-cresol)			not detected	200.00	0.14 ug/L	
	4-Methylphenol (m,p-cresol)			not detected	200.00	0.14 ug/L	
67-72-1	Hexachloroethane			not detected	3.00	0.33 ug/L	
98-95-3	Nitrobenzene			not detected	2.00	0.46 ug/L	
87-68-3	Hexachlorobutadiene			not detected	0.50	0.38 ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	2.00	0.42 ug/L	
	2,4,5-Trichlorophenol			not detected	400.00	0.31 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	0.13	0.36 ug/L	
118-74-1	Hexachlorobenzene			not detected	0.13	0.82 ug/L	
87-86-5	Pentachlorophenol			not detected	100.00	1.08 ug/L	

Qualifiers

E = Value exceeded linear range
 D = Value from dilution
 B = Compound in related blank
 MDL = Method Detection Limit
 R.T. = Retention Time

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army	Lab. ID # :	3367.01-03
	DPW, SELFM-PW-EV	Date Rec'd:	2/26/98
	Bldg. 173	TCLP Ext. Date:	3/12/98
	Ft. Monmouth, NJ 07703	Extraction Date:	3/19/98
		Analysis Date:	4/6/98
Analysis:	EPA Method 608		
Matrix:	Aqueous	Location :	CW-7 Soil Pile
Analyst:	D. Wright		
Ext. Meth:	Sep. Funnel	Field ID:	SP-1, SP-2, SP-3

TCLP PESTICIDES	Dilution Factor	Retention Time	Regulatory Level (mg/L)	MDL (mg/L)	Result (mg/L)
Chlordane	1		0.03	0.00014	ND
Endrin	1		0.02	0.00003	ND
Heptachlor	1		0.008	0.00003	ND
Heptachlor Epoxide	1		0.008	0.00002	ND
Lindane	1		0.40	0.00003	ND
Methoxychlor	1		10.00	0.00010	ND
Toxaphene	1		0.50	0.00020	ND

ND = Not Detected

MDL = Method Detection Limit

NA = Not Applicable

Column-Primary:

Rtx-5 30m/.32mmID/.25um

Column-Confirmation:

Rtx-1701 30m/.32mmID/.25um



Daniel K. Wright
Laboratory Director

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army	Lab. ID # :	3367.04-06
	DPW, SELFM-PW-EV	Date Rec'd:	2/26/98
	Bldg. 173	TCLP Ext. Date:	3/12/98
	Ft. Monmouth, NJ 07703	Extraction Date:	3/19/98
		Analysis Date:	4/6/98
Analysis:	EPA Method 608		
Matrix:	Aqueous	Location :	CW-7 Soil Pile
Analyst:	D. Wright		
Ext. Meth:	Sep. Funnel	Field ID:	SP-4, SP-5, SP-6

TCLP PESTICIDES	Dilution Factor	Retention Time	Regulatory Level (mg/L)	MDL (mg/L)	Result (mg/L)
Chlordane	1		0.03	0.00014	ND
Endrin	1		0.02	0.00003	ND
Heptachlor	1		0.008	0.00003	ND
Heptachlor Epoxide	1		0.008	0.00002	ND
Lindane	1		0.40	0.00003	ND
Methoxychlor	1		10.00	0.00010	ND
Toxaphene	1		0.50	0.00020	ND

ND = Not Detected

MDL = Method Detection Limit

NA = Not Applicable

Column-Primary:

Rtx-5 30m/.32mmID/.25um

Column-Confirmation:

Rtx-1701 30m/.32mmID/.25um


Daniel K. Wright
Laboratory Director

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army	Lab. ID # :	3367.07-09
	DPW, SELFM-PW-EV	Date Rec'd:	2/26/98
	Bldg. 173	TCLP Ext. Date:	3/12/98
	Ft. Monmouth, NJ 07703	Extraction Date:	3/19/98
		Analysis Date:	4/6/98
Analysis:	EPA Method 608		
Matrix:	Aqueous	Location :	CW-7 Soil Pile
Analyst:	D. Wright		
Ext. Meth:	Sep. Funnel	Field ID:	SP-7, SP-8, SP-9

TCLP PESTICIDES	Dilution Factor	Retention Time	Regulatory Level (mg/L)	MDL (mg/L)	Result (mg/L)
Chlordane	1		0.03	0.00014	ND
Endrin	1		0.02	0.00003	ND
Heptachlor	1		0.008	0.00003	ND
Heptachlor Epoxide	1		0.008	0.00002	ND
Lindane	1		0.40	0.00003	ND
Methoxychlor	1		10.00	0.00010	ND
Toxaphene	1		0.50	0.00020	ND

ND = Not Detected

MDL = Method Detection Limit

NA = Not Applicable

Column-Primary: Rtx-5 30m/.32mmID/.25um

Column-Confirmation: Rtx-1701 30m/.32mmID/.25um



Daniel K. Wright
Laboratory Director

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: Telp Blank
Sample Received: 02/26/98
Sample Matrix: Aq

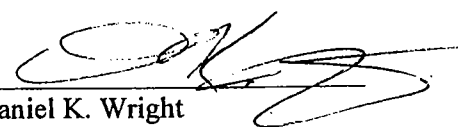
Site: CW-7
Soil Pile

Method of Analysis: Std. Methods 18th, Method 3120B, 3112B
Method of Digestion: E.P.A SW-846, Method 3015

TEST PARAMETER: TCLP Metals

Element	Date Analyzed	Result (mg/L)	Regulatory Level (mg/L)	MDL (mg/L)
Arsenic	03/19/98	ND	5	0.004
Barium	03/19/98	0.009	100	0.001
Cadmium	03/19/98	ND	1	0.001
Chromium	03/19/98	ND	5	0.001
Lead	03/19/98	ND	5	0.004
Mercury	03/20/98	0.0003	0.2	0.0002
Selenium	03/19/98	0.007	1	0.006
Silver	03/19/98	ND	5	0.006

ND = Not Detected, MDL = Method Detection Limit, NA = Not Applicable


Daniel K. Wright
Laboratory Manager

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3367.01-.03
Sample Received: 02/26/98
Sample Matrix: Soil

Site: CW-7
Soil Pile

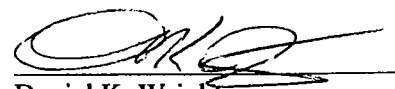
Field ID: SP:1-3

Method of Analysis: Std. Methods 18th, Method 3120B, 3112B
Method of Digestion: E.P.A SW-846, Method 3015

TEST PARAMETER: TCLP Metals

Element	Date Analyzed	Result (mg/L)	Regulatory Level (mg/L)	MDL (mg/L)
Arsenic	03/19/98	ND	5	0.004
Barium	03/19/98	1.138	100	0.001
Cadmium	03/19/98	0.001	1	0.001
Chromium	03/19/98	ND	5	0.001
Lead	03/19/98	0.025	5	0.004
Mercury	03/20/98	ND	0.2	0.0002
Selenium	03/19/98	0.009	1	0.006
Silver	03/19/98	ND	5	0.006

ND = Not Detected, MDL = Method Detection Limit, NA = Not Applicable


Daniel K. Wright
Laboratory Manager

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3367.04-.06
Sample Received: 02/26/98
Sample Matrix: Soil

Site: CW-7
Soil Pile

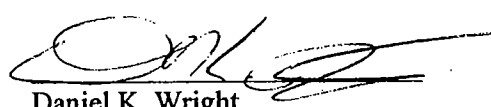
Field ID: SP:4-6

Method of Analysis: Std. Methods 18th, Method 3120B, 3112B
Method of Digestion: E.P.A SW-846, Method 3015

TEST PARAMETER: TCLP Metals

Element	Date Analyzed	Result (mg/L)	Regulatory Level (mg/L)	MDL (mg/L)
Arsenic	03/19/98	ND	5	0.004
Barium	03/19/98	0.699	100	0.001
Cadmium	03/19/98	ND	1	0.001
Chromium	03/19/98	ND	5	0.001
Lead	03/19/98	0.069	5	0.004
Mercury	03/20/98	ND	0.2	0.0002
Selenium	03/19/98	0.007	1	0.006
Silver	03/19/98	ND	5	0.006

ND = Not Detected, MDL = Method Detection Limit, NA = Not Applicable


Daniel K. Wright
Laboratory Manager

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3367.07-.09
Sample Received: 02/26/98
Sample Matrix: Soil

Site: CW-7
Soil Pile


Field ID: SP:7-9

Method of Analysis: Std. Methods 18th, Method 3120B, 3112B
Method of Digestion: E.P.A SW-846, Method 3015

TEST PARAMETER: TCLP Metals

Element	Date Analyzed	Result (mg/L)	Regulatory Level (mg/L)	MDL (mg/L)
Arsenic	03/19/98	ND	5	0.004
Barium	03/19/98	0.195	100	0.001
Cadmium	03/19/98	0.001	1	0.001
Chromium	03/19/98	ND	5	0.001
Lead	03/19/98	0.101	5	0.004
Mercury	03/20/98	ND	0.2	0.0002
Selenium	03/19/98	0.008	1	0.006
Silver	03/19/98	ND	5	0.006

ND = Not Detected, MDL = Method Detection Limit, NA = Not Applicable


Daniel K. Wright
Laboratory Manager

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3367.10-.13
Sample Received: 02/26/98
Sample Matrix: Soil

Site: CW-7
Soil Pile

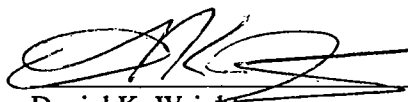
Field ID: SP:10-13

Method of Analysis: Std. Methods 18th, Method 3120B, 3112B
Method of Digestion: E.P.A SW-846, Method 3015

TEST PARAMETER: TCLP Metals

Element	Date Analyzed	Result (mg/L)	Regulatory Level (mg/L)	MDL (mg/L)
Arsenic	03/19/98	ND	5	0.004
Barium	03/19/98	0.915	100	0.001
Cadmium	03/19/98	ND	1	0.001
Chromium	03/19/98	ND	5	0.001
Lead	03/19/98	0.023	5	0.004
Mercury	03/20/98	ND	0.2	0.0002
Selenium	03/19/98	0.008	1	0.006
Silver	03/19/98	0.030	5	0.006

ND = Not Detected, MDL = Method Detection Limit, NA = Not Applicable


Daniel K. Wright
Laboratory Manager



HAMPTON-CLARKE, INC.
ENVIRONMENTAL REMEDIAL AND ANALYTICAL SERVICES

**VERITECH
LABORATORY**

**FORT MONMOUTH
NJDEP STANDARD PACKAGE**

PROJECT: CW-7

LAB#: AA62903 - AA62907

**NJDEP CERT. #14622, CT CERT. #PH0671
PADER CERT. #68-463, MA CERT. #NJ386
NYDOH CERT. #11408**

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3367.10-.13
Sample Received: 02/26/98
Sample Matrix: Soil

Site: CW-7
Soil Pile

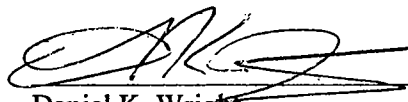
Field ID: SP:10-13

Method of Analysis: Std. Methods 18th, Method 3120B, 3112B
Method of Digestion: E.P.A SW-846, Method 3015

TEST PARAMETER: TCLP Metals

Element	Date Analyzed	Result (mg/L)	Regulatory Level (mg/L)	MDL (mg/L)
Arsenic	03/19/98	ND	5	0.004
Barium	03/19/98	0.915	100	0.001
Cadmium	03/19/98	ND	1	0.001
Chromium	03/19/98	ND	5	0.001
Lead	03/19/98	0.023	5	0.004
Mercury	03/20/98	ND	0.2	0.0002
Selenium	03/19/98	0.008	1	0.006
Silver	03/19/98	0.030	5	0.006

ND = Not Detected, MDL = Method Detection Limit, NA = Not Applicable


Daniel K. Wright
Laboratory Manager



HAMPTON-CLARKE, INC.
ENVIRONMENTAL REMEDIAL AND ANALYTICAL SERVICES

**VERITECH
LABORATORY**

**FORT MONMOUTH
NJDEP STANDARD PACKAGE**

PROJECT: CW-7

LAB#: AA62903 - AA62907

**NJDEP CERT. #14622, CT CERT. #PH0671
PADER CERT. #68-463, MA CERT. #NJ386
NYDOH CERT. #11408**

CT #: PH-0671

MA #: NJ386

NJ #: 14622

NY #: 11408

PA #: 68-463

Report Of Analysis

veritech laboratories

To: Fort Monmouth

Environmental Testing Lab

Bldg. 173

SELFM-PW-EV

Fort Monmouth

NJ 07703

Attention: CHUCK APPLEBY
Project: CW-7

Date Collected: 2/26/98

Date Submitted: 3/18/98

Date Reported: 4/21/98

Lab#	SampleID	TestGroup	Analyte	Units	MDL	PQL	Result
AA62903	3367.01-03						
		% Solids		Percent			80
			% Solids				
		Reactive Cyanide					
			Cyanide (Reactive)	mg/kg	100	100	nd
		Reactive Sulfide					
			Sulfide (Reactive)	mg/kg	250	250	nd
		TCLP Herbicides					
			2,4-D	mg/L (PPM)	0.00046	0.002	ND
			Silvex	mg/L (PPM)	0.00068	0.002	ND
		Total Organic Halide					
			Total Organic Halogen	mg/kg	25	25	nd
AA62904	3367.04-06						
		% Solids		Percent			82
			% Solids				
		Reactive Cyanide					
			Cyanide (Reactive)	mg/kg	100	100	nd
		Reactive Sulfide					
			Sulfide (Reactive)	mg/kg	250	250	nd
		TCLP Herbicides					
			2,4-D	mg/L (PPM)	0.00046	0.002	ND
			Silvex	mg/L (PPM)	0.00068	0.002	ND
		Total Organic Halide					
			Total Organic Halogen	mg/kg	24	24	nd
AA62905	3367.07-09						
		% Solids		Percent			78
			% Solids				
		Reactive Cyanide					
			Cyanide (Reactive)	mg/kg	100	100	nd
		Reactive Sulfide					
			Sulfide (Reactive)	mg/kg	250	250	nd
		TCLP Herbicides					
			2,4-D	mg/L (PPM)	0.00046	0.002	ND
			Silvex	mg/L (PPM)	0.00068	0.002	ND
		Total Organic Halide					
			Total Organic Halogen	mg/kg	26	26	nd

MDL used for 600 and 200 series methods. PQL used for SW846 methods.
ND = Not Detected

Veritech Report Of Analysis
175 Route 46 West, Unit D, Fairfield, NJ 07004

Veritech Project: 03182049

Page . of 2

Lab#	SampleID	TestGroup	Analyte	Units	MDL	PQL	Result
AA62906	3367.10-13						
		% Solids		Percent			81
			% Solids				
		Reactive Cyanide					
			Cyanide (Reactive)	mg/kg	100	100	nd
		Reactive Sulfide					
			Sulfide (Reactive)	mg/kg	250	250	nd
		TCLP Herbicides					
			2,4-D	mg/L (PPM)	0.00046	0.002	ND
			Silvex	mg/L (PPM)	0.00066	0.002	ND
		Total Organic Halide					
			Total Organic Halogen	mg/kg	24	24	nd
AA62907	TCLP Blank						
		TCLP Herbicides					
			2,4-D	mg/L (PPM)	0.00046	0.002	ND
			Silvex	mg/L (PPM)	0.00066	0.002	ND

This report is a true report of results obtained from our tests of this material. In lieu of a formal contract document, the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.

Chris Heltzel

Chris Heltzel - Laboratory Manager

Or

Stanley Gilewicz - Laboratory Director

MDL used for 600 and 200 series methods. PQL used for SW846 methods.
ND = Not Detected

Veritech Report Of Analysis
175 Route 46 West, Unit D, Fairfield, NJ 07004

Veritech Project 03182049

Page 2 of 2



Bldg. 173, SELF-M-PW-EV, Fort Monmouth, NJ 07703
Tel (732) 532-4359 Fax (732) 532-3484 EMail: appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record

03182049

[illegible]

CONDITION UPON RECEIPT FORM

Veritech

Date Received: 3-13-98

Filed By: TF

Client: F+ Monmouth

Project/Account: _____

INITIAL CONDITIONS

YES NO

☒ ☐

[1] Is there a corresponding Chain of Custody included with the samples?

☒ ☐

[2] Are the samples in a container such as a cooler or ice chest?

☐ ☒

[3] Are the custody seals intact?

IF NO, please circle one of the following:

missing

broken

29 °C

[4] Please specify the temperature inside the container.

SAMPLE INFORMATION

YES NO

☒ ☐

[5] Are the samples properly refrigerated (where required)?

☒ ☐

[6] Are the samples within holding times for the parameters listed on the COC?

If NO, list parameters and associated samples: _____

☒ ☐

[7] Are all of the sample bottles intact? If NO, specify sample numbers below:

broken: _____

leaking: _____

☒ ☐

[8] Are all of the sample labels or numbers legible? If NO, specify: _____

☐ ☒

[9] Do the contents of the container match the COC? If NO, specify: Samples

3367 (01-03) (04-06) has two jars a piece and (07-09) and (10-13) has four jars a piece

☐ ☒

[10] Is there enough sample sent for the analyses listed on the COC? If NO, specify:

Samples 3367 (01-03) (04-06) has soil jars only and (07-09) (10-13) has soil and liquid jars

☐ ☐

[11] Are the samples preserved correctly (see Preservation Form for actual pH readings)?

☐ ☐

[12] Are all soil VO(NJ) samples properly preserved in methanol with the correct soil weights (8g - 12g) and accompanied by dry soil? _____

OTHE

☐ ☐

[13] Specify: _____

CORRECTIVE ACTION

NO.

ACTION

Form I
ORGANICS TCLP HERBICIDES REPORT

Sample Number: AA62903

Matrix: Water

Client Id: 3367.01-03

Initial Volume: 100ml

Data File: CNU81.ATB

Final Volume: 10ml

Data Analyzed: 04-01-1998

Dilution Factor: 1

Date Received/Extracted: 3/13/98-3/20/98

Percent Solids: 0

Column: J&W-Scientific db-608/1701 30m .32mmID

<i>CAS #</i>	<i>Compound</i>	<i>PQL/MDL</i>	<i>Concentration mg/L (PPM)</i>
94757	2,4-D	0.0020	U
93721	Silvex	0.0020	U

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.

***** EXTERNAL STANDARD TABLE *****

***** 04-02-1998 11:02:46 Version 5.1 *****

* Sample Name: AA62903,A,HERB Data File: P:CNU81
 * Date: 04-01-1998 10:31:35 Method: R:MHERBU 04-01-1998 08:55:55 # 1250*
 * Interface: 5 Cycle#: 81 Operator MCS Channel#: 0 Vial#: N.A.
 * Starting Peak Width: 2 Threshold: 5 Area Threshold: 1000

 * Instrument Type: HP-5890 Column Type: CAPILLARY/MEGABORE
 * Solvent Description:
 * Conditions: 150deg/.5m 5deg/m to 270 hold for 10
 * Detector 0: ECD Detector 1: ECD
 * Misc. Information: DET 0: DB-1701 -- DET 1: DB-608 SCRIN: *

Starting Delay: 0.00 Ending retention time: 12.50
 Area reject: 500 One sample per 0.202 sec.
 Amount injected: 1.00 Dilution factor: 1.00
 Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in PPB	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
5	1.966	Disamba	8.2846	0.6778%	2673	1027	2.61	5	0	-8.0653E-03
10	2.582	2,4-D	7.5009	-0.2044%	2369	906	2.61	10	0	-2.7592E-03
14	3.070	Silver	3.3707	-0.2755%	6031	1815	3.31	14	0	-1.8567E-03
17	3.377	2,4,5-T	4.7615	0.3881%	18435	6506	2.81	17	0	7.3184E-04
18	3.592	2,4-db	1233.0780	100.7677%	538194	157278	3.41	18	0	7.8401E-03

TOTAL AMOUNT = 1223.6834

4/02/98

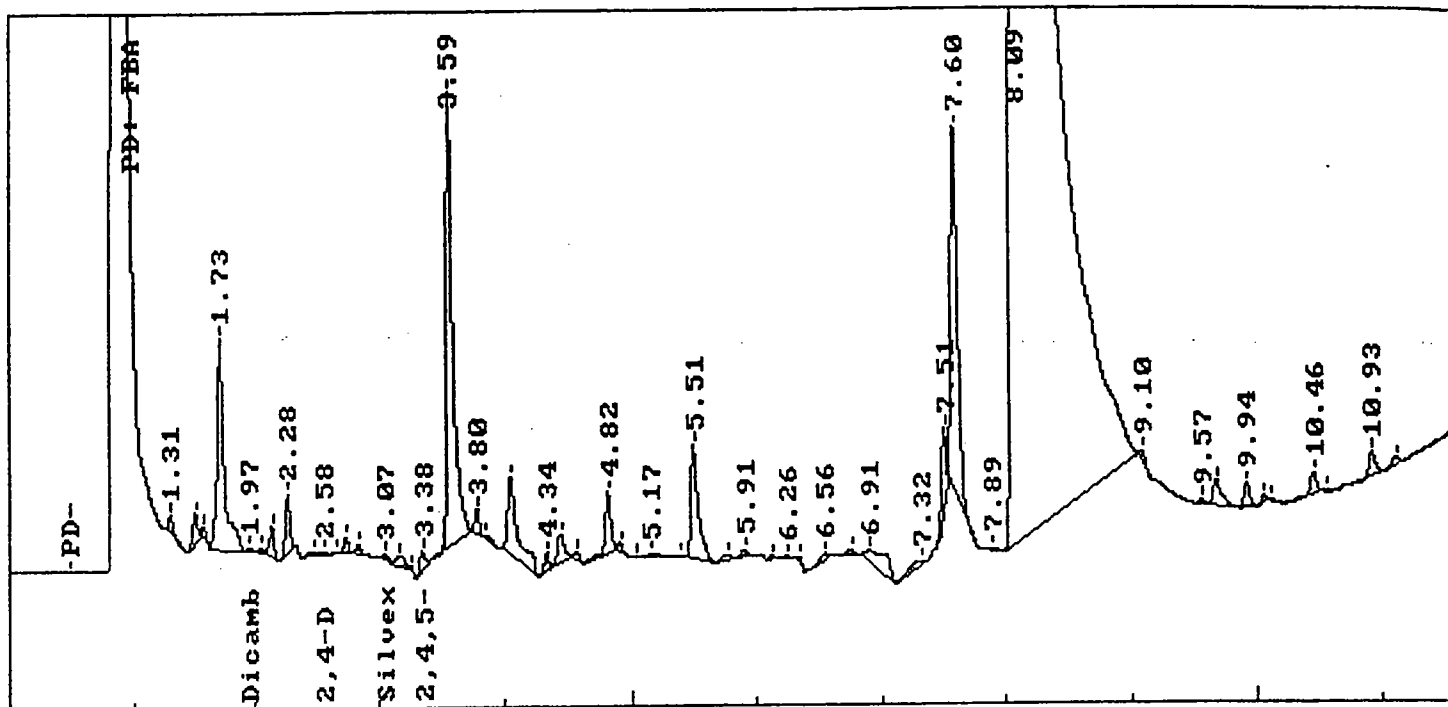
Areas, times, and heights stored in: P:CNU81.ATB

Data File = P:CNU81.PTS Printed on 04-02-1998 at 11:02:48

Start time: 0.00 min. Stop time: 12.50 min.

Offset: 0 mv.

Full Range: 200 millivolts



Form1

ORGANICS TCLP HERBICIDES REPORT

Sample Number: AA62904

Matrix: Water

Client Id: 3367.04-06

Initial Volume: 100ml

Data File: CNU82.ATB

Final Volume: 10ml

Data Analyzed: 04-01-1998

Dilution Factor: 1

Date Received/Extracted: 3/13/98-3/20/98

Percent Solids: 0

Column: J&W-Scientific db-608/1701 30m .32mmID

CAS #	Compound	PQL/MDL	Concentration mg/L (PPM)
94757	2,4-D	0.0020	U
93721	Silvex	0.0020	U

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

***** EXTERNAL STANDARD TABLE *****

***** 04-02-1998 11:02:50 Version 5.1 *****

* Sample Name: AA62904,A,HERB Data File: P:CNU82
 * Date: 04-01-1998 10:49:36 Method: R:MHERBU 04-01-1998 08:55:55 # 1250
 * Interface: 5 Cycle#: 82 Operator MCS Channel#: 0 Vial#: N.A.
 * Starting Peak Width: 2 Threshold: 5 Area Threshold: 1000

* Instrument Type: HP-5890 Column Type: CAPILLARY/MEGABORE
 * Solvent Description:

* Conditions: 150deg/.5m 5deg/m to 270 hold for 10
 * Detector 0: ECD Detector 1: ECD

* Misc. Information: DET 0: DB-1701 -- DET 1: DB-608 SCRIN:

Starting Delay: 0.00 Ending retention time: 12.50
 Area reject: 500 One sample per 0.202 sec.
 Amount injected: 1.00 Dilution factor: 1.00
 Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in PPB	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
4	1.977	Dicamba	7.7158	0.5725%	5204	1673	3.1 1	4	0	-4.6109E-03
11	2.070	Silvex	2.7008	0.2004%	8255	2858	2.8 1	11	0	-9.1296E-04
13	2.377	2,4,5-E	5.7870	0.4384%	21339	7555	2.8 1	13	0	7.6600E-04
14	3.592	2,4-db	1352.3523	100.3435%	599955	174320	3.4 1	14	0	7.7579E-03

TOTAL AMOUNT = 1347.7225

PEAKS NOT FOUND IN THIS RUN
 NAME ADJUSTED RET.TIME. REFERENCE PEAK
 2,4-D 2.60 2,4-D

4/02/98

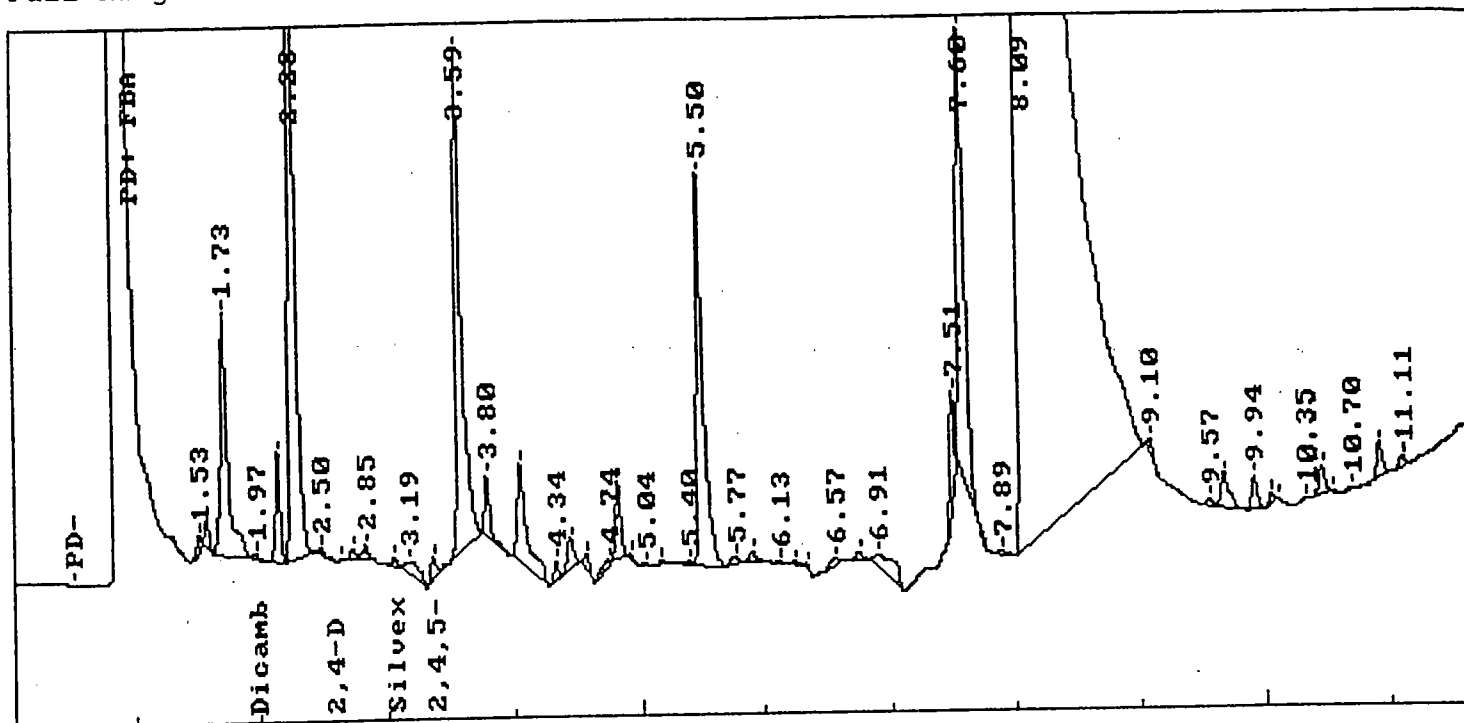
Areas, times, and heights stored in: P:CNU82.ATB

Data File = P:CNU82.PTS Printed on 04-02-1998 at 11:02:52

Start time: 0.00 min. Stop time: 12.50 min.

Offset: 0 mv.

Full Range: 200 millivolts



Form1
ORGANICS TCLP HERBICIDES REPORT

Sample Number: AA62905	Matrix: Water
Client Id: 3367.07-09	Initial Volume: 100ml
Data File: CNU83.ATB	Final Volume: 10ml
Data Analyzed: 04-01-1998	Dilution Factor: 1
Date Received/Extracted: 3/13/98-3/20/98	Percent Solids: 0
Column: J&W-Scientific db-608/1701 30m .32mmID	

CAS #	Compound	PQL/MDL	Concentration mg/L (PPM)
94757	2,4-D	0.0020	U
93721	Silvex	0.0020	U

Total Target Concentration 0

*U - Indicates the compound was analyzed but not detected.
J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.*

***** EXTERNAL STANDARD TABLE *****

***** 04-02-1998 11:02:55 Version 5.1 *****
 * Sample Name: AA62905,A,HERB Data File: P:CNU83 *
 * Date: 04-01-1998 11:07:25 Method: R:MHERBU 04-01-1998 08:55:55 # 1250 *
 * Interface: 5 Cycle#: 83 Operator MCS Channel#: 0 Vial#: N.A. *
 * Starting Peak Width: 2 Threshold: 5 Area Threshold: 1000 *

 * Instrument Type: HP-5890 Column Type: CAPILLARY/MEGABORE *
 * Solvent Description: *
 * Conditions: 150deg/.5m 5deg/m to 270 hold for 10 *
 * Detector 0: ECD Detector 1: ECD *
 * Misc. Information: DET 0: DB-1701 -- DET 1: DB-608 SCR#: *

Starting Delay: 0.00 Ending retention time: 12.50
 Area reject: 500 One sample per 0.202 sec.
 Amount injected: 1.00 Dilution factor: 1.00
 Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in PPB	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
4	1.266	Disamba	8.3884	0.6345%	7389	909	2.6 1	4	0	-9.2251E-03
11	2.070	Silvex	2.8445	0.3227%	7302	3543	2.0 1	13	0	-1.1581E-03
15	3.177	2,4,5-t	7.0908	0.5363%	75036	8889	2.8 1	15	0	7.9770E-04
16	3.592	2,4-db	1326.3666	100.3209%	587964	170578	3.4 1	16	0	7.7757E-03

TOTAL AMOUNT = 1322.1245

PEAKS NOT FOUND IN THIS RUN
 NAME ADJUSTED RET.TIME. REFERENCE PEAK
 2,4-D 2.59 2,4-D

4/02/98

***** EXTERNAL STANDARD TABLE *****

***** 04-02-1998 11:03:42 Version 5.1 *****

* Sample Name: AA62906,A,HERB Data File: P:CNU87 *

* Date: 04-01-1998 12:18:49 Method: R:MHERBU 04-01-1998 08:55:55 # 121 *

* Interface: 5 Cycle#: 87 Operator MCS Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 2 Threshold: 5 Area Threshold: 1000 *

* Instrument Type: HP-5890 Column Type: CAPILLARY/MEGABORE *

* Solvent Description: *

* Conditions: 150deg/.5m 5deg/m to 270 hold for 10 *

* Detector 0: ECD Detector 1: ECD *

* Misc. Information: DET 0: DB-1701 -- DET 1: DB-608 SCRIN: *

Starting Delay: 0.00 Ending retention time: 12.50

Area reject: 500 One sample per 0.202 sec.

Amount injected: 1.00 Dilution factor: 1.00

Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in PPB	NORMALIZED CONC	AREA	AREA/ HEIGHT	REF PEAK	% DELTA RET TIME	CONC/AREA
9	3.586	2,4-D	1.2584	0.27811	1522	698	2.2.1	9	-4.6714E-03
14	3.070	Silvex	1.4806	0.29701	5301	1628	2.2.1	14	-2.1381E-03
16	3.380	2,4,5-T	4.5588	0.28901	19256	6399	2.1.1	16	7.2373E-04
17	3.596	2,4-db	1173.9882	100.18611	521381	148961	3.5.1	17	7.8812E-03

TOTAL AMOUNT = 1171.8080

PEAKS NOT FOUND IN THIS RUN
NAME ADJUSTED RET.TIME. REFERENCE PEAK
Dicamba 1.96 Dicamba

4/02/98

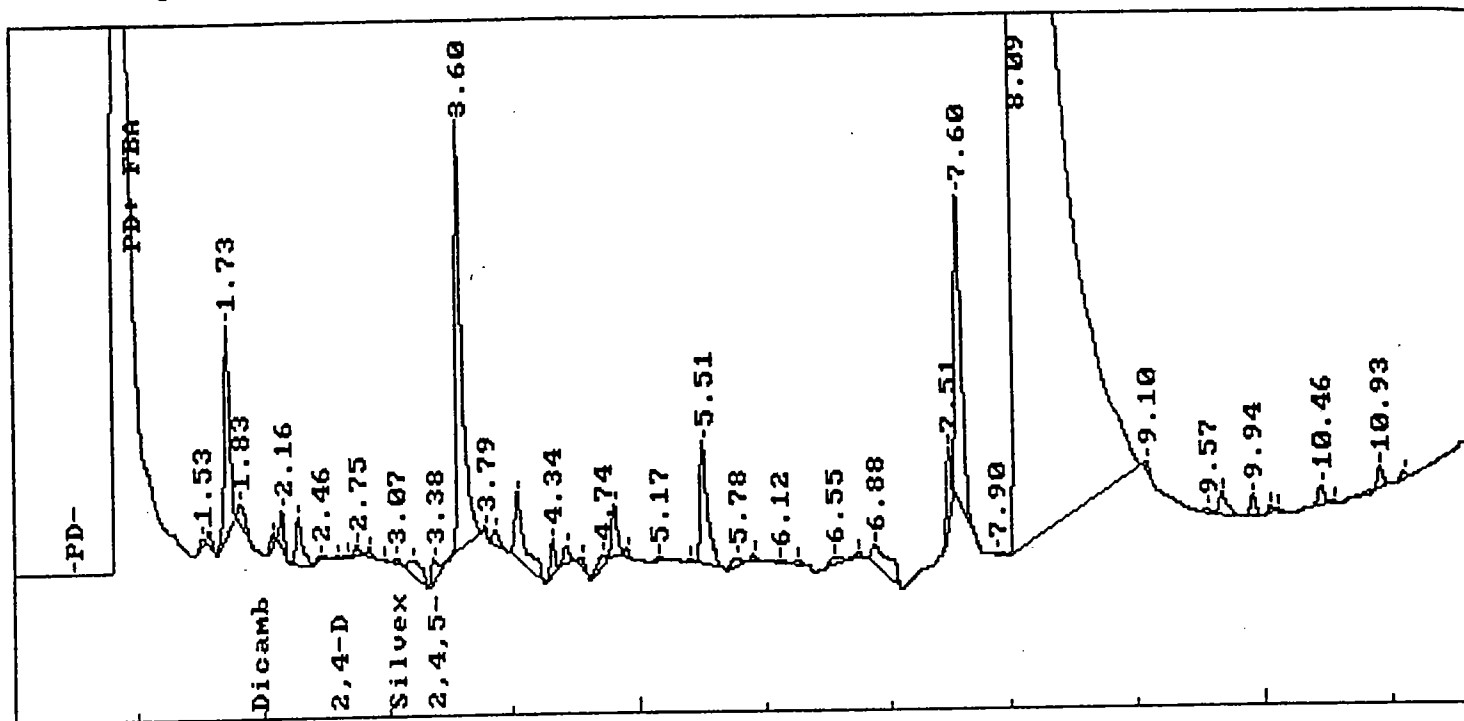
Areas, times, and heights stored in: P:CNU87.ATB

Data File = P:CNU87.PTS Printed on 04-02-1998 at 11:03:44

Start time: 0.00 min. Stop time: 12.50 min.

Offset: 0 mv.

Full Range: 200 millivolts



Form 1

Matrix: Water

Initial Volume: 100ml

Final Volume: 10ml

Dilution Factor: 1

Percent Solids: 0

Column: J&W-Scientific db-608/1701 30m .32mmID

CAS #	Compound	PQLMDL	Concentration mg/L (PPM)
94757	2,4-D	0.0020	U
93721	Silvex	0.0020	U

***** EXTERNAL STANDARD TABLE *****

***** 04-02-1998 11:03:46 Version 5.1 *****

Data File: P:CNU88

* Sample Name: AA62907,A,HERB
 * Date: 04-01-1998 12:36:39 Method: R:MHERBU 04-01-1998 08:55:55 # 1250*
 * Interface: 5 Cycle#: 88 Operator MCS Channel#: 0 Vial#: N.A.
 * Starting Peak Width: 2 Threshold: 5 Area Threshold: 1000

* Instrument Type: HP-5890 Column Type: CAPILLARY/MEGABORE

* Solvent Description:

* Conditions: 150deg/.5m 5deg/m to 270 hold for 10

* Detector 0: ECD Detector 1: ECD

* Misc. Information: DET 0: DB-1701 -- DET 1: DB-608 SCRN:

Starting Delay: 0.00 Ending retention time: 12.50

Area reject: 500 One sample per 0.202 sec.

Amount injected: 1.00 Dilution factor: 1.00

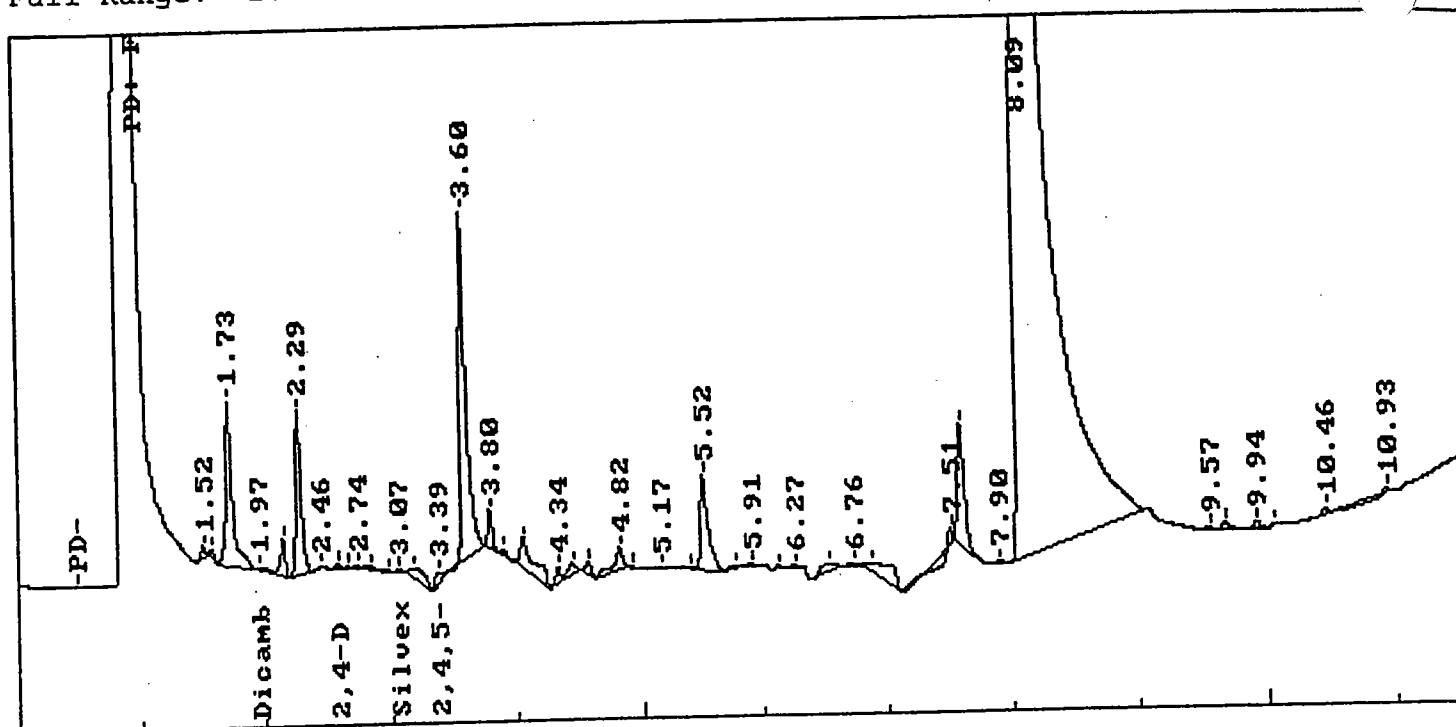
Sample Weight: 1.00000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in PPB	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT BL	REF PEAK	% DELTA RET TIME	CONC/AREA
4	1.270	Disamba	8.5287	0.8878%	3899	749	5.2 1	4	0	-1.1391E-02
8	2.593	2,4-D	0.0269	0.0028%	4481	1604	2.8 1	8	0	1.6767E-05
11	1.074	Silvex	1.9127	0.4072%	2366	891	2.7 1	13	0	-4.3923E-03
15	1.387	2,4,5-t	1.4088	0.1466%	10361	3083	3.4 1	15	0	4.5691E-04
16	3.596	2,4-db	971.8035	101.1456%	416627	121137	3.4 1	16	0	8.0223E-03

TOTAL AMOUNT = 960.7969

4/02/98

Areas, times, and heights stored in: P:CNU88.ATB
Data File = P:CNU88.PTS Printed on 04-02-1998 at 11:03:47
Start time: 0.00 min. Stop time: 12.50 min. Offset: 0 mv.
Full Range: 200 millivolts



APPENDIX K

**Hazardous and Non-Hazardous Waste Manifests and Disposal Certificates
State of New York Hazardous Waste Manifest, November 1997
Certificates of Disposal, CWM Chemical Services, Model City, NY, November 1997
Certificate of Destruction and Recycling, Clean Earth of New Castle, New Castle,
DE, June 1998**

YB8830755

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS



HAZARDOUS WASTE MANIFEST
P.O. Box 12820, Albany, New York 12212

Please type or print. Do not staple.

(Hazardous Waste Manifest 4/97)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA No. NJ2210020778		Manifest Doc. No. 09082		2. Page 1 of 1		Information within heavy bold line is not required by Federal Law.					
3. Generator's Name and Mailing Address US ARMY COMMUNICATIONS ELECTRONIC COMMAND SELEN-DE-EM-HV FORT MONMOUTH NJ 07703 SELEN-PA-EV, CHARLES WOOD AREA 201 544-4349						A. NYB8830755							
4. Generator's Telephone Number						B. Generator's ID NAME							
5. Transporter 1 (Company Name) Freehold Cartage Inc			6. US EPA ID Number NJ0099126184			C. State Transporter's ID AA911E/NJ							
7. Transporter 2 (Company Name) FREEHOLD CARTAGE INC			8. US EPA ID Number NJ0054126164			D. Transporter's Telephone (732) 422-1001							
9. Designated Facility Name and Site Address CYN CHEMICAL SERVICES, INC. 1550 BALMER RD. MODEL CITY NY 14107						E. State Transporter's ID T3K7871-NJ							
						F. Transporter's Telephone (732) 462-1001							
10. US EPA ID Number NJ0099126184						G. State Facility ID							
						H. Facility Telephone (716) 544-0231							
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) a. RU, POLYCHLORINATED BIPHENYL MIXTURE, 9, UN2315, 111						12. Containers Number Type		13. Total Quantity		14. Unit Wt/Vol		I. Waste No.	
						9910M		19773		E		EPA XXXX STATE XXXX	
b.												EPA STATE	
												EPA STATE	
c.												EPA STATE	
												EPA STATE	
d.												EPA STATE	
												EPA STATE	
J. Additional Descriptions for Materials listed Above BY2104						K. Handling Codes for Wastes Listed Above							
a.						a.							
b.						b.							
c.						c.							
d.						d.							
15. Special Handling Instructions and Additional Information 1. PCB Out of Service Date: 11/1/97 2. Service Request #: CHEMTREC Emergency Response Number (800) 424-9300 814773222													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a small generator, I have made a good faith effort to minimize my waste and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name Joseph M. Fallon				Signature <i>Joseph M. Fallon</i>				Mo. Day Year 11/1/97					
17. Transporter 1 Acknowledgement of Receipt of Materials													
Printed/Typed Name Harold Jordan				Signature <i>Harold Jordan</i>				Mo. Day Year 11/1/97					
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name PAUL W BLACK				Signature <i>Paul W Black</i>				Mo. Day Year 11/1/97					
19. Discrepancy Indication Space actual found 17741 Kg													
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.													
Printed/Typed Name Coleen M. Duman				Signature <i>Coleen M. Duman</i>				Mo. Day Year 11/1/97					

COPY 5-Generator-mailed by TSD facility

DISPOS STANDARDS FOR NEW YORK STATE
REGULATED HAZARDOUS PCB WASTES

GENERATOR NAME: US ARMY COMMUNICATIONS ELECTRONIC COMMAND

MANIFEST # NYB8830755 CWM PROFILE # BV-2104

UNIQUE DRUM # NA OUT OF SERVICE DATE: 11-14-97

The following NY State regulated wastes and land restricted in the State of New York and are subject to 6 NYCRR Part 376. Refer to 6 NYCRR 376.4(f) for New York land disposal requirements. Check all that apply:

☐ B001 ☐ B002 ☐ B003 ☐ B004 ☐ B005 ☐ B006 ☒ B007

Certification - Waste Meets Treatment Standards



I am the generator of the waste as identified above, that is restricted under 6 NYCRR Part 376. I have determined that this waste meets all applicable treatment standards set forth in 6 NYCRR 376 and, therefore, it can be land disposed without further treatment.

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that waste complies with the treatment standards specified in Part 376, Section 376.4 and all applicable prohibitions set forth in subdivision 376.3(b) of Part 376 or RCRA Section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification including the possibility of a fine or imprisonment.

Notification - Waste Does Not Meet Treatment Standards

☐ I am the generator of a waste restricted under 6 NYCRR Part 376 as identified above. I notify that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this notification that the waste does not comply with the treatment standards specified in 6 NYCRR Part 376.4(f). This waste must be treated to the applicable standard set forth in 6 NYCRR 376.4(f) prior to land disposal.

GENERATOR'S SIGNATURE: Joseph M. Fallon

TITLE Environmental Scientist

DATE: 11/18/97



Waste Management, Inc.

CWM Chemical Services, Inc.
1550 Balmer Rd.
P.O. Box 200
Model City, N. Y. 14107

Phone 716/754-8231

Federal EPA ID: NYD049836679

US ARMY COMMUNICATION/ELECTRONIC COMMAND
ATTN: SELFM PW EV
NJ2210020978
CHARLES WOOD AREA
FORT MONMOUTH NJ 07703

CERTIFICATE OF DISPOSAL

CWM Chemical Services, Inc. has received waste material from US ARMY COMMUNICATION/ELECTRONIC COMMAND on 11/21/97 as described on Hazardous Waste Manifest number NYB8830755 Sequence number 01. CWM Chemical Services, Inc., hereby certifies that the above described material was landfilled in accordance with the 40 CFR part 761 as it pertains to the land disposal of polychlorinated biphenyl contaminated materials.


Profile Number: BV2104
CWM Tracking ID: 8147832201
CWM Unit #: 1*0
Disposal Date: 11/21/97

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate and complete.

Bill Knickerbocker

BILL KNICKERBOCKER
TECHNICAL MANAGER
Certificate # 100036
11/24/97

For questions please call
our Customer Service Dept.
at (800) 843-3604

CERTIFIED WEIGHTMASTER WEIGHT TICKET		US Army Garrison Fort Monmouth Directorate for Installation Logistics, Sup Svcs Div. Fort Monmouth, New Jersey 07703	
WEIGHT		Lbs. GROSS 80,010	
Lbs. TARE 36,430		Lbs. NET 43,580	
Lbs. NET 43,580		COMMODITY Soil	
VEHICLE IDENTIFICATION TR# 90 Box# 9606		B/L NUMBER	
NAME OF SHIPPER FT. Monmouth - DDW - ENVIRO		NAME OF CARRIER FCI	
REMARKS		DRIVER SIGNATURE 	
DATE 18 Nov 97		DRIVER ON <input type="checkbox"/> DRIVER OFF <input checked="" type="checkbox"/>	
WEIGHTMASTER Kevin Victor		WEIGHTMASTER	



P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924

175 BARTOW MUN. AIRPORT
BARTOW, FL 33830
PHONE: (941) 533-4599
FAX: (941) 533-1613

108 MONAHAN AVENUE
DUNMORE, PA 18512
PHONE: (717) 342-7232
FAX: (717) 342-7367

350 PIGEON POINT ROAD
NEW CASTLE, DE 19720
PHONE: (302) 658-2005
FAX: (302) 658-6229

156 DRIFTWOOD DRIVE
EUTAWVILLE, SC 29918
PHONE/FAX: (803) 452-9595

MANIFEST

FCI EPA ID NO.:

NJD054126164

I38763

GENERATOR NAME/ADDRESS <i>Fort Monmouth USAF EC Officers Club Eatons Town NJ 07703</i>		PHONE <i>(732) 532-6223</i>		GENERATOR EPA ID NO. <i>NJ122110020978</i>	
CI REP. LOADING (PRINT) <i>Herald Jordan</i>		PROCEDURE <i>R10</i>	BOX SPOTTED <i>20-R</i>	BOX REMOVED <i>20-R</i>	TIME AT GENERATOR (MILITARY TIME ONLY) <i>08:55</i>
COMMENTS OR DELAYS AT GENERATOR		TRACTOR <i>90</i>	TRAILER	APPOINTMENT TIME <i>7:00</i>	ARRIVAL TIME <i>08:55</i>
					DEPARTURE TIME <i>2:30</i>
				EQUIPMENT USED <i>Roll Top Brown Bag</i>	

BROKER: <i>ECO-TRON</i>		STATE MANIFEST NO.: <i>NY B8830755</i>
PO#:	WO#:	

X) IM	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM
<input checked="" type="checkbox"/>	<i>see manifest</i>	<i>9</i>	<i>2315</i>	<i>III</i>	<i>1</i>	<i>CM</i>	<i>19773</i>	<i>K</i>	<i>B007</i>	<i>S</i>
<input type="checkbox"/>										
<input type="checkbox"/>										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (I.E., IDENTIFICATION SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DOES NOT HAVE TO BE MANIFESTED).

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transported named. Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the generator is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE <i>Joseph Fallon</i>	GENERATOR'S SIGNATURE <i>X Joseph Fallon</i>	DATE LOADED <i>11/18/97</i>
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.		MO. DAY YR.

TSDF NAME/ADDRESS <i>CWM Chemical Services 1550 Palmer Rd Model City N.Y. 14107</i>		PHONE <i>(716) 754-8231</i>		TSDF EPA ID NO. <i>NY10049836679</i>	
CI REP. UNLOADING (PRINT)		PROCEDURE	BOX SPOTTED	BOX REMOVED	TIME AT TSDF (MILITARY TIME ONLY)
COMMENTS OR DELAYS AT TSDF					ARRIVAL TIME
					DEPARTURE TIME
				EQUIPMENT USED	

PLEASE PRINT NAME/TITLE	TSDF SIGNATURE <i>X</i>	DATE UNLOADED <i>/ /</i>
		MO. DAY YR.

AR H-0257 PC 944	ME ME-HWT-47 ME-WOT-47	MO H-1490 ND WH-429	NOVA SCOTIA, CANADA NSC 000 147	QUEBEC, CANADA QC-6ML-047
CT CT-HW-307	MD HWH-167 96-OP-1765	NH TNH-0047	OH 333-HW	RI RI-535
DE DE-HW-203 DE-SW-203	MA MA-294	NJ S-2265 15939	OK 3358	TX 40705
SWH-1540	MN 61572	NY JA-113	ONTARIO, CANADA A 840943	WI 11602
			PA PA-AH-0067	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDF
Gold - Retained by Generator

I38763

NYB8830764

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS



HAZARDOUS WASTE MANIFEST
P.O. Box 12820, Albany, New York 12212

Please type or print. Do not staple.

(Hazardous Waste Manifest 4/97)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA No. # 1 1 2 2 1 0 0 2 0 9 1 8		Manifest Doc. No. 000003		2. Page 1 of 1		Information within heavy bold line is not required by Federal Law.					
3. Generator's Name and Mailing Address US ARMY COMMUNICATIONS ELECTRONIC CENTER SELF-HQ-EM-HQ FORT MONMOUTH NJ 07703						NYB8830764							
4. Generator's Telephone Number 201-544-4489													
5. Transporter 1 (Company Name) Firehold Outage Inc.				6. US EPA ID Number NJ000294261104		B. Generator's ID SAME							
7. Transporter 2 (Company Name) Frech. L. Corp. Inc.				8. US EPA ID Number NJ0003541140104		C. State Transporter's ID NJ000294261104							
9. Designated Facility Name and Site Address CWH CHEMICAL SERVICES, INC. 1550 BALMER RD. MODEL CITY NY 14107						D. Transporter's Telephone (708) 411-1000							
						E. State Transporter's ID TAE 1180 N							
10. US EPA ID Number # 1 1 0 0 9 9 8 3 6 A 7 9						F. Transporter's Telephone (908) 462-7100							
						G. State Facility ID							
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number) a. EQ, POLYCHLORINATED BIPHENYL MIXTURE, 9. UN2315, 111						12. Containers Number Type		13. Total Quantity		14. Unit Wt/Vol		I. Waste No.	
						001 97		27725		K		EPA None	
b.												STATE BC07	
												EPA	
c.												STATE	
												EPA	
d.												STATE	
												EPA	
J. Additional Descriptions for Materials listed Above BV2104						K. Handling Codes for Wastes Listed Above							
a						b		c		d			
b						c		d		e			
15. Special Handling Instructions and Additional Information a. F.B. Out of Service Date: 11/15/17 b. Service Request #: 111-1111 c. HENTREC Emergency Response Number (800) 424-9100													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a small generator, I have made a good faith effort to minimize my waste and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name Joseph M. Fallon				Signature <i>Joseph M. Fallon</i>				Mo. Day Year 11 15 17					
17. Transporter 1 Acknowledgement of Receipt of Materials													
Printed/Typed Name B. Burns				Signature <i>B. Burns</i>				Mo. Day Year 11 15 17					
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name				Signature				Mo. Day Year					
19. Discrepancy Indication Space Actual sent 20766 K													
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.													
Printed/Typed Name Colleen M. D...				Signature <i>Colleen M. D...</i>				Mo. Day Year 11 15 17					

COPY 5-Generator-mailed by TSD facility

DISPC L STANDARDS FOR NEW YORK STATE
REGULATED HAZARDOUS PCB WASTES

GENERATOR NAME: US ARMY COMMUNICATIONS ELECTRONIC COMMAND

MANIFEST # NYB8830764 CWM PROFILE # BV-2104

UNIQUE DRUM # NA OUT OF SERVICE DATE: 11-14-97

The following NY State regulated wastes and land restricted in the State of New York and are subject to 6 NYCRR Part 376. Refer to 6 NYCRR 376.4(f) for New York land disposal requirements. Check all that apply:

☐ B001 ☐ B002 ☐ B003 ☐ B004 ☐ B005 ☐ B006 ☒ B007

Certification - Waste Meets Treatment Standards

☒ I am the generator of the waste as identified above, that is restricted under 6 NYCRR Part 376. I have determined that this waste meets all applicable treatment standards set forth in 6 NYCRR 376 and, therefore, it can be land disposed without further treatment.

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that waste complies with the treatment standards specified in Part 376, Section 376.4 and all applicable prohibitions set forth in subdivision 376.3(b) of Part 376 or RCRA Section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification including the possibility of a fine or imprisonment.

Notification - Waste Does Not Meet Treatment Standards

☐ I am the generator of a waste restricted under 6 NYCRR Part 376 as identified above. I notify that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this notification that the waste does not comply with the treatment standards specified in 6 NYCRR Part 376.4(f). This waste must be treated to the applicable standard set forth in 6 NYCRR 376.4(f) prior to land disposal.

GENERATOR'S SIGNATURE: Joseph M. Fallon

TITLE: Environmental Scientist

DATE: 11/18/97



Waste Management, Inc.

CWM Chemical Services, Inc.
1550 Balmer Rd.
P.O. Box 200
Model City, N. Y. 14107

Phone 716/754-8231

Federal EPA ID: NYD049836679

US ARMY COMMUNICATION/ELECTRONIC COMMAND
ATTN: SELFM PW EV
NJ2210020978
CHARLES WOOD AREA
FORT MONMOUTH NJ 07703

CERTIFICATE OF DISPOSAL

CWM Chemical Services, Inc. has received waste material from US ARMY COMMUNICATION/ELECTRONIC COMMAND on 11/21/97 as described on Hazardous Waste Manifest number NYB8830764 Sequence number 01. CWM Chemical Services, Inc., hereby certifies that the above described material was landfilled in accordance with the 40 CFR part 761 as it pertains to the land disposal of polychlorinated biphenyl contaminated materials.

Profile Number: BV2104
CWM Tracking ID: 8147831601
CWM Unit #: 1*0
Disposal Date: 11/21/97

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate and complete.

Jill Knickerbocker
JILL KNICKERBOCKER
TECHNICAL MANAGER
Certificate # 100035
11/24/97

For questions please call
our Customer Service Dept.
at (800) 843-3604



P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924

175 BARTOW MUN. AIRPORT
BARTOW, FL 33830
PHONE: (941) 533-4599
FAX: (941) 533-1613

108 MONAHAN AVENUE
DUNMORE, PA 18512
PHONE: (717) 342-7232
FAX: (717) 342-7367

350 PIGEON POINT ROAD
NEW CASTLE, DE 19720
PHONE: (302) 658-2005
FAX: (302) 658-6229

156 DRIFTWOOD DRIVE
EUTAWVILLE, SC 29048
PHONE/FAX: (803) 492-9595

MANIFEST

FCI EPA ID NO.:
NJDO54126164

I38717

GENERATOR NAME/ADDRESS to Mon		PHONE (AREA CODE) 85		GENERATOR EPA ID NO. NJ2210020978	
CI REP. LOADING (PRINT) Bine		PROCEDURE Live LOAD	BOX SPOTTED 9112	APPOINTMENT TIME 07:30	
COMMENTS OR DELAYS AT GENERATOR Actual Arrival 0730 HRS.				EQUIPMENT USED	

BROKER:		STATE MANIFEST NO.: 11188830773											
PO#:		WO#:											
X	IM	PROPER U.S. D.O.T. SHIPPING NAME 20 Polychlorinated Biphenyl mix.	U.S. D.O.T. HAZARDOUS CLASS 9	NA/UN/NO. 2315	PACKING GROUP II	NO. CONT. 01	CONT. TYPE CM	NET QUANTITY 43,840	UNIT MEASURE P	WASTE NO. B007	FORM S		
	2												
	3												

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (I.E., IDENTIFICATION SHIPMENT OF A NON-HAZARDOUS NATURE WHICH DOES NOT HAVE TO BE MANIFESTED).

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named, Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the generator is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE Joseph M. Fallon	GENERATOR'S SIGNATURE X Joseph M. Fallon I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.	DATE LOADED 11/18/97 MO. DAY YR.
----------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------

TSDF NAME/ADDRESS C.M.M.		PHONE (AREA CODE)		TSDF EPA ID NO. NYD049836679	
CI REP. UNLOADING (PRINT) Model City, NY		PROCEDURE	BOX SPOTTED	BOX REMOVED	APPOINTMENT TIME
COMMENTS OR DELAYS AT TSDF				EQUIPMENT USED	

PLEASE PRINT NAME/TITLE	TSDF SIGNATURE X	DATE UNLOADED / / MO. DAY YR.
-------------------------	----------------------------	--------------------------------------------

AR H-0257 PC 944	ME ME-HWT-47 ME-WOT-47	MO H-1490	NOVA SCOTIA, CANADA NSC 000 147	QUEBEC, CANADA QC-6ML-047
CT CT-HW-307	MD HWH-167 96-OP-1765	ND WH-429	OH* 333-HW	RI RI-535
DE DE-HW-203	MA MA-294	NH TNH-0047	OK 3358	TX 40705
DE-SW-203	MN 61572	NJ S-2265 15939	ONTARIO, CANADA A 840943	WI 11602
SWH-1540		NY JA-113	PA PA-AH-0067	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDF
Gold - Retained by Generator

I38717

Clean Earth of New Castle, Inc.

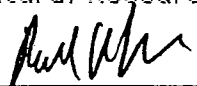
94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

9015
CDR# 9018

Certificate of Destruction and Recycling

This is to certify that the soil delivered to Clean Earth of New Castle, Inc. from the site described in the contaminated soil profile sheet that was issued the Approval Number listed below and represented by the attached treatment report, has been duly treated and rendered safe for beneficial reuse in accordance with the permit to operate issued to Clean Earth of New Castle, Inc. by the Delaware Department of Natural Resources.

Authorized Signature _____


Paul A. Lane, Operations Manager
June 16, 1998

Approval#
Generator
Site Location

980139
U.S. ARMY, FORT MONMOUTH
CHARLES WOOD AREA
FORT MONMOUTH, NJ 08057

Total Tons This Certificate: 33.44
Total Tickets This Certificate: 1
Treatment Date or Dates: 6/4/98-6/4/98

CLEAN EARTH OF NEW CASTLE, INC. 6/16/98
Treatment Report

Page # 1

CDR# 9015
Generator U.S. ARMY, FORT MONMOUTH
Site Location CHARLES WOOD AREA
FORT MONMOUTH, NJ 08057

Total Tickets 1
Total Tons 33.44

<u>Ticket #</u>	<u>Rec. Date</u>	<u>Approval #</u>	<u>Net Tons</u>	<u>B</u>	<u>I</u>	<u>E</u>	<u>X Post TPH</u>
39960	6/4/98	980139	33.44	<5	<5	<5	<15

CENC
Delivery Report - DR & Approval**

6/10/98

From: 6/3/98
To: 6/5/98
Approval#: 980139
Generator: U.S. ARMY, FORT MONMOUTH
Origin: CHARLES WOOD AREA
FORT MONMOUTH, NJ 08057

*Loads 16
TOTAL 415.44

Date	Ticket #	Approval #	Truck #	Loc.	Manifest #s	Net Tons
6/3/98	39898	980139	206	B4	001	24.90
6/3/98	39899	980139	1565	B4	002	24.61
6/3/98	39904	980139	2	B4	003	26.32
6/3/98	39905	980139	12	B4	004	20.53
6/3/98	39906	980139	04	B4	005	24.57
6/3/98	39907	980139	1	B4	006	20.06
6/4/98	39919	980139	31	B4	007	25.11
6/4/98	39920	980139	388	B4	008	28.04
6/4/98	39938	980139	17	B4	009	32.57
6/4/98	39946	980139	403	B4	010	23.27
6/4/98	39947	980139	400	B4	011	25.72
6/4/98	39950	980139	6260	B4	012	25.46
6/4/98	39960	980139	6393	B4	013	33.44
6/5/98	39969	980139	401	B4	014	28.63
6/5/98	39970	980139	400	B4	015	26.79
6/5/98	39981	980139	403	B4	016	25.42

415.44 tons



CLEAN EARTH OF NEW CASTLE, INC. INVOICE DATE

6/4/98

94 Pyles Lane
P.O. Box 1049
New Castle, DE 19720-1049
(302) 427-6633

TREATMENT INVOICE LOAD LIST

Invoice# A-4893
Approval# 980139
Generator U.S. ARMY, FORT MONMOUTH

<u>Load#</u>	<u>Rec. Date</u>	<u>B/L</u>	<u>Manifest#</u>	<u>Net Tons</u>	<u>Surcharge</u>
39898	6/3/98		001	24.90	N/A
39899	6/3/98		002	24.61	N/A
39904	6/3/98		003	26.32	N/A
39905	6/3/98		004	20.53	N/A
39906	6/3/98		005	24.57	N/A
39907	6/3/98		006	20.06	N/A
39919	6/4/98		007	25.11	N/A
39920	6/4/98		008	28.04	N/A

194.14 tons

**CLEAN EARTH OF NEW CASTLE, INC. INVOICE DATE**

6/10/96

94 Pyles Lane
P.O. Box 1049
New Castle, DE 19720-1049
(302) 427-6633

TREATMENT INVOICE LOAD LIST

Invoice# A-4903
Approval# 980139
Generator U.S. ARMY, FORT MONMOUTH

<u>Load#</u>	<u>Rec. Date</u>	<u>B/L</u>	<u>Manifest#</u>	<u>Net Tons</u>	<u>Surcharge</u>
39938	6/4/98		009	32.57	N/A
39946	6/4/98		010	23.27	N/A
39947	6/4/98		011	25.72	N/A
39950	6/4/98		012	25.46	N/A
39960	6/4/98		013	33.44	N/A
39969	6/5/98		014	28.63	N/A
39970	6/5/98		015	26.79	N/A
39981	6/5/98		016	25.42	N/A

221.3 tons

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/3/98**
Time **11:31 AM**
Ticket# **39898**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
ON PCB MINERAL OIL	80,480	30,680	24.90	

M ID# **618** **JANET W. ELLIOTT**
Bill of Lading#
Manifest# **001**
St. Manifest#

Signature *Janet W. Elliott*

Trans. ID# **157**
Transporter **R.J.T. TRANSPORT**
Trans. Addr. **72 ROWLAND ROAD
CRANBURY, NJ 08512**

DE-SW Permit# **813**

Driver **HEMINGWAY** Truck # **206**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLESWOOD AREA
FORT MONMOUTH, NJ 08057**

Contact 1 **TAHER GINWALA** **609-893-7873**
Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/5/98**
Time **8:03 AM**
Ticket# **39981**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	77,560	26,720	25.42	

WM ID# **518** **JANET W. ELLIOTT**
Bill of Lading#
Manifest# **016**
St. Manifest#

Signature *Janet W. Elliott*

Trans. ID# **19**
Transporter **TAT TRUCKING, INC.**
Trans. Addr. **3482 WRANGLE HILL ROAD**
BEAR, DE 19701

DE-SW Permit# **077**

Driver **HOWLAND -** Truck # **403**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLESWOOD AREA**
FORT MONMOUTH, NJ 08057

Contact 1 **TAHER GINYALA** **609-893-7873**
Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 606

CENC TICKET # 39898

GENERATOR'S NAME & ADDRESS

US ARMY FORT MONMOUTH

DIRECTORATE OF PUBLIC WORKS BLD. 173

FORT MONMOUTH, NJ 07703

GENERATOR'S PHONE # 732-532-6223

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

SAME

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

NON DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name

Joseph M. Fallon

Title

Environmental Scientist

Signature

Joseph M. Fallon

Date

6/3/98

TRANSPORTER

Company RJT TRANSPORT

Phone #

Address 72 ROWLAND RD., CRANBURY, NJ 08512

Gross Weight:

80480 lb 11:44 AM 6/3/98

DE SW HAULERS PERMIT #B13

Tare Weight:

30880 lb 12:02 PM 6/3/98

Driver: George Hemmway

Net Weight:

24,90

(TYPE OR PRINT CLEARLY)

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature

George Hemmway

Date

6/3/98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature

James Elliott

Date

6/3/98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature

Date

6-3-98

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castle, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-0634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 062

CENC TICKET # 39899

GENERATOR'S NAME & ADDRESS:

IS ARMY FORT MONMOUTH

DIRECTORATE OF PUBLIC WORKS BLD. 173

FORT MONMOUTH, NJ 07703

GENERATOR'S PHONE #: 732-532-6223

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

SAME

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

ION DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT. MATERIAL

hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name:

Joseph M. Fallon

Signature:

Title:

Environmental Scientist

Date:

6/3/98

TRANSPORTER

Company: RJT TRANSPORT

Phone #

Address: 72 ROWLAND RD., CRANBURY, NJ 08512

Gross Weight:

82820 lb 11:49 AM 06/13/98

DE SW HAULERS PERMIT #B13

Driver:

Dean Fiorentino

Tare Weight:

33600 lb 12:13 PM 06/13/98

Net Weight:

24,661

(TYPE OR PRINT CLEARLY)

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature:

Dean Fiorentino

Date:

6-3-98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature:

Dean Fiorentino

Date:

6-3-98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature:

Dean Fiorentino

Date:

6-3-98

Waiting
7:00 to 10:00
J.M.E.

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/3/98**
Time **11:43 AM**
Ticket# **39899**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	82,820	33,600	24.61	

WM ID# **619** **JANET W. ELLIOTT**

Signature *Janet W. Elliott*

Lot of Lading#

Manifest# **002**

St. Manifest#

Trans. ID# **157**

Transporter **R.I.T. TRANSPORT**

DE-SW Permit# **813**

Trans. Addr. **72 ROWLAND ROAD
CRANBURY, NJ 08512**

Driver **FIORENTINO**

Truck # **1565**

Customer **ECO-TRON NEW JERSEY, INC.**

Generator **U.S. ARMY, FORT MONMOUTH**

Generator Site **CHARLES WOOD AREA
FORT MONMOUTH, NJ 08057**

Contact 1 **TAHER GINWALA**

609-893-7873

Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

TYPE OR PRINT CLEARLY

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 003

CENC TICKET # 39904

GENERATOR'S NAME & ADDRESS

S ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703

SELF-
PW-BV

Site Address

SAME SITE ID #NJ2210020978
CHARLES WOOD AREA
S A M E

GENERATOR'S PHONE #: 732-532-6223

Est. Quantity: 2 2

DESCRIPTION OF MATERIAL:

"ON DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT. MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally, it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name:

Joseph M. Fallon

Title:

Environmental Scientist

Signature:

Joseph M. Fallon

Date:

6/3/98

TRANSPORTER

Company: RJT TRANSPORT

Phone #

Address: 72 ROWLAND RD., CRANBURY, NJ 08512

Gross Weight: 78560 lb 12:42 PM 06/03/98

DE SW HAULERS PERMIT # B13

Tare Weight: 26020 lb 12:59 PM 06/03/98

Driver: Kevin Markey

Net Weight: 26132

(TYPE OR PRINT CLEARLY)

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature:

Kevin Markey

Date:

6/3/98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature:

[Signature]

Date:

6/3/98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature:

Janet Elliott

Date:

6-3-98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/3/98**
Time **12:37 PM**
Ticket # **39904**

Approval # **380139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	78,660	26,020	26.32	

WM ID# **518** **JANET W. ELLIOTT** Signature *Janet W. Elliott*
Bill of Lading#
Manifest# **003**
Est. Manifest#

Trans. ID# **157**
Transporter **R.T.T. TRANSPORT** DE-SW Permit # **1813**
Trans. Addr. **72 ROWLAND ROAD**
CRANBURY, NJ 08512

Driver **MARKEY** Truck # **2**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLES WOOD AREA**
FORT MONMOUTH, NJ 08057

Contact 1 **TAHER GINWALA** **609-893-7873**
Contact 2

NOTES 1:
NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 004

CENC TICKET #39905

GENERATOR'S NAME & ADDRESS:

S ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703

SELF
PW-EV

Site Address

SAME SITE ID #NJ2210020978
CHARLES WOOD AREA
S A M E

GENERATOR'S PHONE # 732-532-6223

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

ION DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name

Joseph M. Fallon

Title:

Environmental Scientist

Signature

Joseph M. Fallon

Date:

6/3/98

TRANSPORTER

Company RJT TRANSPORT

Phone #

Address: 72 ROWLAND RD. CRANBURY, NJ 08512

Gross Weight: 76480 lb 12:48 PM 06/03/98

DE SW HAULER PERMIT #813

Tare Weight: 35420 lb 01:17 PM 06/03/98

Driver:

Matt Jones

Net Weight: 20.53

(TYPE OR PRINT CLEARLY)

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature:

Date:

6/3/98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature:

Date:

6/3/98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature:

Date:

6-3-98

ARRIVE JOB 7:00
LEAVE JOB 10:55
CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castle, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 04 005

CENC TICKET # 39906

GENERATOR'S NAME & ADDRESS

9 ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703

SELF-
PU-EV

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

SAME

GENERATOR'S PHONE # 732-532-6223

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

UNION DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT. MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name: Joseph M. Fallon
Signature: Joseph M. Fallon

Title: Environmental Scientist
Date: 6/3/98

TRANSPORTER

Company RJT TRANSPORT

Phone #

Address: 72 ROWLAND RD., CRANBURY, NJ 08512

DE SW HAULERS PERMIT #813

Driver: Dan Batte
(TYPE OR PRINT CLEARLY)

Gross Weight: 75820 lb 12:56 PM

Tare Weight: 28680 lb 01:23 PM

Net Weight: 24.57

06/03/98
06/03/98

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature: Dan Batte

Date: 6-3-98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature: Dan Batte

Date: 6-3-98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature: Janet Elliott

Date: 6-3-98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Site **6/3/98**
Time **12:46 PM**
Ticket# **39906**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	75,820	26,680	24.57	

WM ID# **518** **JANET W. ELLIOTT**
Bill of Lading#
Est# **005**
St. Manifest#

Signature *Janet W. Elliott*

Trans. ID# **157**
Transporter **R.I.T. TRANSPORT**
Trans. Addr. **72 ROWLAND ROAD
CRANBURY, NJ 08512**

DE-SW Permit# **813**

Driver **BATON** Truck # **04**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLESWOOD AREA
FORT MONMOUTH, NJ 08057**

Contact 1 **TAHER GINWALA** **609-893-7873**
Contact 2

NOTES 1:
NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 006

CENC TICKET #39907

GENERATOR'S NAME & ADDRESS:

US ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703

SELEM
PO-EV

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

S A M E

GENERATOR'S PHONE # 732-532-6223

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

NON DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name: Joseph M. Fallon
Signature: Joseph M Fallon

Title: Environmental Scientist
Date: 6/3/98

TRANSPORTER

Company: RJT TRANSPORT

Phone #

Address: 72 ROWLAND RD., CRANBURY, NJ 08512

DE SW HAULERS PERMIT #813

Driver: Willie Spikes

Gross Weight: 65380 lb 01:03 PM 06/03/98

Tare Weight: 25860 lb 01:29 PM 06/03/98

Net Weight: 20.06

(TYPE OR PRINT CLEARLY)

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature: Willie Spikes

Date: 6-3-98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature: Willie Spikes

Date: 6-3-98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature: Janet Elliott

Date: 6-3-98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/3/98**
Time **12:53 PM**
Ticket# **39907**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	65,980	25,860	20.06	

WM ID# **618 JANET W. ELLIOTT**

Signature *Janet W. Elliott*

Lot of Lading#

Est# **006**

St. Manifest#

Trans. ID# **157**

Transporter **R.T.T. TRANSPORT**

DE-SW Permit# **813**

Trans. Addr. **72 ROWLAND ROAD
CRANBURY, NJ 08512**

Driver **SPIKES**

Truck # **1**

Customer **ECO-TRON NEW JERSEY, INC.**

Generator **U.S. ARMY, FORT MONMOUTH**

Generator Site **CHARLES WOOD AREA
FORT MONMOUTH, NJ 08057**

Contact 1 **TAHER GIRWALA**

609-893-7873

Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

TYPE OR PRINT CLEARLY

APPROVAL #980139

TRUCK NUMBER

MANIFEST #

CENC TICKET #

GENERATOR'S NAME & ADDRESS

U.S. ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703
GENERATOR'S PHONE #: 732-532-6223

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

SAME

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

NON DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT. MATERIAL

Thereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name: Joseph M. Fallon
Signature: Joseph M. Fallon

Title: Environmental Scientist
Date: 6/3/98

TRANSPORTER

Company: RJT TRANSPORT

Phone #

Address: 72 ROWLAND RD., CRANBURY, NJ 08512

DE SW HAULERS PERMIT #B13

Driver: Scott Gargano
(TYPE OR PRINT CLEARLY)

Gross Weight: 85000 lb 06:44 AM 06/04/98
Tare Weight: 34780 lb 07:08 AM 06/04/98
Net Weight: 25.11

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature: Scott Gargano

Date: 6/3/98

DESTINATION

hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware

Driver Signature: Scott Gargano

Date: 6/4/98

hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware

Authorized Signature: [Signature]

Date: 6/4/98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/4/98**
Time **6:28 AM**
Ticket # **39919**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	85,000	34,780	25.11	

Form ID# **48** **JOSH LEONARD**
Loading#
Manifest# **007**
Manifest#

Signature *Janet W. Elliott*

Trans. ID# **157**
Transporter **R.J.T. TRANSPORT**
Trans. Addr. **72 ROWLAND ROAD
CRANBURY, NJ 08512**

DE-SW Permit# **813**

Driver **GARGANO** Truck # **31**

Customer **ECD-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLES WOOD AREA
FORT MONMOUTH, NJ 08057**

Contact 1 **TAHER GINWALA** **609-893-7873**
Contact 2

NOTES 1:
NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castle, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 008

CENC TICKET #39920

GENERATOR'S NAME & ADDRESS:

U.S. ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703

GENERATOR'S PHONE #: 732-532-6223

Site Address

SAME SITE ID #NJ221002097B

SELF-MANAGED PW-EV CHARLES WOOD AREA
SAME

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

NON DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name: Joseph M. Fallon

Signature: Joseph M. Fallon

Title: Environmental Scientist

Date: 6/3/98

TRANSPORTER

Company: RJT TRANSPORT

Phone #

Address: 72 ROWLAND RD. CRANBURY, NJ 08512

Gross Weight:

86040 lb 06:53 AM 06/04/98

DE SW HAULERS PERMIT #B13

Tare Weight:

29960 lb 07:18 AM 06/04/98

Driver: KEN A. BUCKLEY

Net Weight:

28.04

(TYPE OR PRINT CLEARLY)

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature: [Signature]

Date: 6/3/98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature: [Signature]

Date: 6/4/98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature: Janet Elliott

Date: 6-4-98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/4/98**
Time **6:41 AM**
Ticket # **39920**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	86,040	29,960	28.04	

WM ID# **518** **JANET W. ELLIOTT** Signature *Janet W. Elliott*
Bill of Lading# **008**
St. Manifest#

Trans. ID# **157**
Transporter **R.I.T. TRANSPORT**
Trans. Addr. **72 ROWLAND ROAD**
CRANBURY, NJ 08512

DE-SW Permit# **813**

Driver **BOEKHOUT** Truck # **388**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLES WOOD AREA**
FORT MONMOUTH, NJ 08057

Contact 1 **TAHER BINWALA** **609-893-7873**
Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 069

CENC TICKET # 39938

GENERATOR'S NAME & ADDRESS:

US ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703

GENERATOR'S PHONE #: 732-532-6223

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

S A M E

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

NON DOT REGULATED/RCRA NON-HAZARDOUS-PETROLEUM HYDROCARBON CONT MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name: Joe Fallon

Signature: Joe Fallon

TRANSPORTER TAT/Hob NAB

Company Ref: TRANSPORT

Title: Environmental Scientist

Date: 6/4/98

Phone #

Address: 72 ROWLAND RD, CRANBURY, NJ 08512

DE SW HAULERS PERMIT#B13

Driver: Joe Rosman (Rosman)

(TYPE OR PRINT CLEARLY)

Gross Weight: 91300 lb 10:00 AM 06/04/98

Tare Weight: 26160 lb 10:11 AM 06/04/98

Net Weight: 32.57

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature: Joe Rosman

Date: 6-7-98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature: Joe Rosman

Date: 6-11-98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature: Janet Elliott

Date: 6-4-98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633
INCOMING LOAD TICKET

Date **6/4/98**
Time **9:53 AM**
Ticket# **39938**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	91,300	26,160	32.57	

WM ID# **518** **JANET W. ELLIOTT**

Signature *Janet W. Elliott*

Inf. Loading#
Est# **009**
St. Manifest#

Trans. ID# **32**
Transporter **HAB NAB TRUCKING, INC.**
Trans. Addr. **P.O. BOX 420
1129A BRICKYARD ROAD
SEAFORD, DE 19973**

DE-SW Permit# **070**

Driver **ROSA RIO** Truck # **17**

Customer **ECO-TRON NEW JERSEY, INC.**

Generator **U.S. ARMY, FORT MONMOUTH**

Generator Site **CHARLES WOOD AREA
FORT MONMOUTH, NJ 08057**

Contact 1 **TAHER GINWALA** **609-893-7873**

Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 43 610

CENC TICKET # 39946

GENERATOR'S NAME & ADDRESS

18 ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703

GENERATOR'S PHONE # 732-532-6223

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

SAME

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

UNION DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT. MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name: Joe Fallon

Signature: Joe Fallon

Title: Environmental Scientist

Date: 6/4/98

TRANSPORTER

Company: RUT TRANSPORT, Inc.

Phone #

Address: 22 ROWLAND RD. CRANBURY NJ 08522

DE SW HAULERS PERMIT #13

Driver: [Signature]

Gross Weight: 73600 lb 11:14 AM 06/04/98

Tare Weight: 27060 lb 11:38 AM 06/04/98

Net Weight: 23.27

(TYPE OR PRINT CLEARLY)

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature: [Signature]

Date: 6-4-98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature: [Signature]

Date: 6-4-98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature: Janet Elliott

Date: 6-4-98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633
INCOMING LOAD TICKET

Date **6/4/98**
Time **11:05 AM**
Ticket# **39946**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	73,600	27,060	23.27	

WM ID# **618** **JANET W. ELLIOTT** Signature *Janet W. Elliott*
of Lading# **1**
Est# **010**
St. Manifest# **1**

Trans. ID# **19**
Transporter **TAT TRUCKING, INC.** DE-SW Permit# **077**
Trans. Addr. **3482 WRANGLE HILL ROAD**
BEAR, DE 19701

Driver **HOWLAND** Truck # **403**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLES WOOD AREA**
FORT MONMOUTH, NJ 08057

Contact 1 **TAHER GINYALA** **609-893-7873**
Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 011

CENC TICKET # 39947

GENERATOR'S NAME & ADDRESS

IS ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703

GENERATOR'S PHONE # 732-532-6223

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

S A M E

Est. Quantity: 2 2

DESCRIPTION OF MATERIAL

NON DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT. MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name: Joe Fallon

Signature: Joe Fallon

Title: Environmental Scientist

Date: 6/4/98

TRANSPORTER

Company: R J TRANSPORT, Inc.

Phone #

Address: 72 ROUNDA RD. CRANBURY, NJ 08512

Gross Weight: 82280 LB 11:23 AM 06/04/98

DE SW HAULERS PERMIT # 037

Tare Weight: 30840 LB 11:45 AM 06/04/98

Driver: James Koller

Net Weight: 25.72

(TYPE OR PRINT CLEARLY)

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature: James Koller

Date: 6-4-98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature: James Koller

Date: 6-4-98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature: Janet Elliott

Date: 6-4-98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/4/98**
Time **11:05 AM**
Ticket# **39946**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	73,600	27,060	23.27	

WM ID# **518** **JANET W. ELLIOTT** Signature *Janet W. Elliott*
of Lading# **010**
Manifest# **010**

Trans. ID# **19**
Transporter **TAT TRUCKING, INC.**
Trans. Addr. **3482 WRANGLE HILL ROAD**
BEAR, DE 19701

DE-SW Permit# **077**

Driver **HOWLAND** Truck # **403**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLES WOOD AREA**
FORT MONMOUTH, NJ 08057

Contact 1 **TAHER GINYALA** **609-893-7873**
Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST #

CENC TICKET #

GENERATOR'S NAME & ADDRESS

IS ARMY FORT MONMOUTH

DIRECTORATE OF PUBLIC WORKS BLD. 173

PORT MONMOUTH, NJ 07703

GENERATOR'S PHONE # 732-532-6223

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

SAME

Est. Quantity: 22

DESCRIPTION OF MATERIAL

NON DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT. MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name

Signature

TRANSPORTER

Company EIT TRANSPORT

Address 72 ROWLAND RD. CRANBURY, NJ 08512

DE SW Haulers PERMIT # 037

Driver James Koller

(TYPE OR PRINT CLEARLY)

Title

Date

Phone #

Gross Weight:

Tare Weight:

Net Weight:

82280 LB 11:23 AM 06/04/98

30840 LB 11:45 AM 06/04/98

25.72

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature

Date

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature

Date

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature

Date

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Site **6/4/98**
Time **11:13 AM**
Ticket# **39947**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	82,280	30,840	25.72	

#M ID# **518** **JANET W. ELLIOTT** Signature *Janet W. Elliott*
1 of Lading#
Test# **011**
Manifest#

Trans. ID# **19**
Transporter **TAT TRUCKING, INC.**
Trans. Addr. **3482 WRANGLE HILL ROAD**
BEAR, DE 19701

DE-SW Permit# **077**

Driver **ROLLER** Truck # **400**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLESWOOD AREA**
FORT MONMOUTH, NJ 08057

Contact 1 **TAHER GINYALA** **609-893-7873**
Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castle, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 013

CENC TICKET # 39950

GENERATOR'S NAME & ADDRESS

IS ARMY FORT MONMOUTH

DIRECTORATE OF PUBLIC WORKS BLD. 173

FORT MONMOUTH, NJ 07703

GENERATOR'S PHONE # 732-532-6223

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

SAME

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

UNDOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT. MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name: Joe Fallon

Signature: Joe Fallon

TRANSPORTER

Company: H&B-NAB

Address: 72 BOWLAND RD. CRANBURY, NJ 08512

DE SW HAULERS PERMIT# B10 070

Driver: William Hayes

(TYPE OR PRINT CLEARLY)

Title: Environmental Scientist

Date: 6/4/98

Phone #

Gross Weight: 81520 lb 11:48 AM 06/04/98

Tare Weight: 30800 lb 12:05 PM 06/04/98

Net Weight: 25.46

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature: William Hayes

Date: 6-4-98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware

Driver Signature: William Hayes

Date: 6-4-98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware

Authorized Signature: Janet Elliott

Date: 6-4-98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633
INCOMING LOAD TICKET

Date **6/4/98**
Time **11:39 AM**
Ticket# **39950**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
CON PCB MINERAL OIL	81,520	30,600	25.46	

MAN ID# **618** **JANET W. ELLIOTT** Signature *Janet W. Elliott*

Lot of Lading#
Lot# **012**
Manifest#

Cons. ID# **32**
Transporter **HAB NAB TRUCKING, INC.**
Cons. Addr. **P.O. BOX 420
1129A BRICKYARD ROAD
SEAFORD, DE 19973**

DE-SW Permit# **070**

Driver **HAYES** Truck # **6260**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLESWOOD AREA
FORT MONMOUTH, NJ 08057**

Contact 1 **TAHER GINWALA** **609-893-7873**
Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

TYPE OR PRINT CLEARLY

APPROVAL #980139

TRUCK NUMBER

MANIFEST #

CENC TICKET #

GENERATOR'S NAME & ADDRESS

U.S. ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703

SELF-M-
PW-EV

GENERATOR'S PHONE # 732-532-6223

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

S A M E

Est. Quantity: 2 2

DESCRIPTION OF MATERIAL:

NON DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT. MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name

Joe Fallon

Title

Environmental Scientist

Signature

Joe Fallon

Date

6/4/98

TRANSPORTER

Company: J.T. TRANSPORT

Hab. Nub. TAT

Phone #

Address: 72 ROWLAND RD., CRANBURY, NJ 08512

Gross Weight:

98380 15 01:42 PM 06/04/98
31500 15 02:05 PM

DE SW HAULERS PERMIT # 070

Tare Weight:

33.44

Driver: Kevin Zaleska

Net Weight:

(TYPE OR PRINT CLEARLY)

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature

Kevin Zaleska

Date

6-4-98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware

Driver Signature

Kevin Zaleska

Date

6-4-98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware

Authorized Signature

Janet Elliott

Date

6-4-98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/4/98**
Time **1:40 PM**
Ticket# **39960**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
NON PCB MINERAL OIL	98,380	31,500	33.44	

WM ID# **S18** **JANET W. ELLIOTT**
Bill of Lading#
Est# **013**
St. Manifest#

Signature *Janet W. Elliott*

Trans. ID# **32**
Transporter **HAB NAB TRUCKING, INC.**
Trans. Addr. **P.O. BOX 420
1129A BRICKYARD ROAD
SEAFORD, DE 19973**

DE-SW Permit# **070**

Driver **HASSLER** Truck # **6393**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLES WOOD AREA
FORT MONMOUTH, NJ 08057**

Contact 1 **TAHER GIMWALA** **609-893-7873**
Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

401

MANIFEST # 614

CENC TICKET # 39969

GENERATOR'S NAME & ADDRESS

U.S. ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703

SELF-
PW-EV

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

S A M E

GENERATOR'S PHONE #: 732-532-6223

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

NON DOT REGULATED/BCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT. MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name

Joe Fallon

Title

Environmental Scientist

Signature

Joe Fallon

Date

6/4/98

TRANSPORTER

Company RJT TRANSPORT TAT

Phone #

Beav, DE

Address 72 ROWLAND RD. CRANBURY, NJ 08512

Gross Weight: 87140 lb 03:33 PM 06/

DE SW HAULERS PERMIT #813

Tare Weight:

Driver: Michael Howland

Net Weight: 29880 lb 03:44 PM 06/

(TYPE OR PRINT CLEARLY)

28.63

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature

Michael Howland

Date

June 4, 1998

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature

Joe Fallon

Date

4/4/98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature

Joe Fallon

Date

6-5-98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/5/98**
Time **6:55 AM**
Ticket# **39969**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
ON PCB-MINERAL OIL	87,140	29,880	28.63	

M ID# **618** **JANET W. ELLIOTT**

Signature *Janet W. Elliott*

Lot of Lading#

Test# **014**

Lot Manifest#

Trans. ID# **19**

Transporter **TAT TRUCKING, INC.**

DE-SW Permit# **077**

Trans. Addr. **3482 WRANGLE HILL ROAD**

BEAR, DE 19701

Driver **HOWLAND**

Truck # **401**

Customer **ECO-TRON NEW JERSEY, INC.**

Generator **U.S. ARMY, FORT MONMOUTH**

Generator Site **CHARLES WOOD AREA
FORT MONMOUTH, NJ 08057**

Contact 1 **TAHER GINWALA**

609-893-7873

Contact 2

NOTES 1:

NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

(TYPE OR PRINT CLEARLY)

APPROVAL #980139

TRUCK NUMBER

MANIFEST # 015

CENC TICKET # 39970

GENERATOR'S NAME & ADDRESS

US ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ. 07703

GENERATOR'S PHONE #: 732-532-6223

Site Address

SAME SITE ID #NJ2210020978
CHARLES WOOD AREA
S A M E

Est. Quantity: 2 2

DESCRIPTION OF MATERIAL:

UNION DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT MATERIAL

I hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name: Joe Fallon

Signature: Joe Fallon

Title: Environmental Scientist

Date: 6/4/98

TRANSPORTER

Company: TAT TRUCKING
BEAR, D. J.

Phone #

Address: 72 ROWLAND RD., CRANBURY, NJ 08512

DE SW HAULERS PERMIT #013

Driver: James Loller
(TYPE OR PRINT CLEARLY)

Gross Weight: 84080 lb 07:04 AM 06/05/98

Tare Weight: 30500 lb 07:30 AM 06/05/98

Net Weight: 26.79

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature: James Loller

Date: 6-4-98

DESTINATION

I hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature: James Loller

Date: 6-4-98

I hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature: Janet Elliott

Date: 6-5-98

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/5/98**
Time **6:58 AM**
Ticket# **39970**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
ON PCB MINERAL OIL	84,080	30,500	26.79	

M ID# **518** **JANET W. ELLIOTT** Signature *Janet W. Elliott*
Type of Lading#
Manifest# **015**
Manifest#

Trans. ID# **19**
Transporter **TAT TRUCKING, INC.** DE-SW Permit# **077**
Trans. Addr. **3482 WRANGLE HILL ROAD**
BEAR, DE 19701

Driver **LOLLER** Truck # **400**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**
Generator Site **CHARLESWOOD AREA**
FORT MONMOUTH, NJ 08057

Contact 1 **TAHER GINWALA** **609-893-7873**
Contact 2

NOTES 1:
NOTES 2:

THANK YOU

CLEAN EARTH OF NEW CASTLE, INC.
94 Pyles Lane New Castel, DE. 19720
Tele#(302) 427-6633/800-30EARTH
Fax#(302) 427-6634

NON-HAZARDOUS MATERIALS MANIFEST

TYPE OR PRINT CLEARLY

APPROVAL #980139

TRUCK NUMBER

MANIFEST #

CENC TICKET #

GENERATOR'S NAME & ADDRESS

US ARMY FORT MONMOUTH
DIRECTORATE OF PUBLIC WORKS BLD. 173
FORT MONMOUTH, NJ 07703

SELF
PW - EV

GENERATOR'S PHONE # 732-532-6223

Site Address

SAME SITE ID #NJ2210020978

CHARLES WOOD AREA

SAME

Est. Quantity: 22

DESCRIPTION OF MATERIAL:

NON DOT REGULATED/RCRA NON-HAZARDOUS PETROLEUM HYDROCARBON CONT MATERIAL

hereby certify that the above described materials is not a hazardous waste as defined by 40 CFR Part 261 nor is it contaminated by PCB as defined by 40 CFR part 761. Additionally it is the same material which was analyzed and described in the application for treatment provided to Clean Earth of New Castle, Inc. which resulted in the approval number listed above. It is properly classified and packaged for transportation in accordance with applicable regulations.

Name: Joe Fallon

Signature: Joe Fallon

Title:

Date:

TRANSPORTER

Company: TAT TRUCKING

Phone #

Address: 72 ROWLAND RD., CRANBURY, NJ 08512

DE SW HAULERS PERMIT #BT3 077

Driver:

Gross Weight: 77560 lb 08:12 AM 06/05/98

Tare Weight: 26720 lb 08:30 AM 06/05/98

Net Weight: 25,420

(TYPE OR PRINT CLEARLY)

I hereby certify the above described materials were picked up at the above described generator address without incident and will be delivered without tampering of any kind.

Driver Signature:

Date:

DESTINATION

hereby certify that the above described materials was delivered to Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Driver Signature:

Date:

hereby certify that the above described material has been accepted at Clean Earth of New Castle, Inc. at 94 Pyles Lane, New Castle, Delaware.

Authorized Signature:

Date:



of New Castle, Inc.

94 Pyles Lane • P.O. Box 1049 • New Castle, DE 19720-1049

Telephone: (302) 427-6633 • Fax: (302) 427-6634

APPROVAL NUMBER: _____

CONTAMINATED SOIL PROFILE SHEET**Generator Information**

Name: _____

U.S. Army Fort Monmouth

Address: _____

Directorate of Public Works, Bldg. 173, SELFM-PW-

City: _____

Fort Monmouth

State: _____

NJ

Zip Code: _____

07703

Agent or Contact Point: _____

Joe Fallon

Telephone: _____

732-532-622

Company Name: _____**Billing Information**

Name: _____

ECO-Tron, New Jersey, Inc Telephone: 609-727-7200

Address: _____

P.O. Box 67, Attn: Tahar Ginwala

City: _____

Moorestown

State: _____

NJ

Zip Code: _____

08057

Site Description

Address: _____

U.S. Army Fort Monmouth, Charles Wood Area

City: _____

Fort Monmouth

State: _____

NJ

Zip Code: _____

07703

Existing Site Land Use: _____

Military Installation How Many Years: 56

Previous Site Land Uses And Years Each: _____

Farm land

Is this Site a State or Federal Superfund Site: Yes ☐ No ☒**Soil Description**

Source of Contamination (UST or Other): _____

Non-PCB Transformers

Estimated Volume of Soil: _____ Tons

250

Cubic Yards

Type of Contamination (Gas, Kero, #2, #4, #5 Oil, Etc.): _____

Electrical Oil

If Contamination is Other Than Above Please Specify: _____

Is a Soil Analysis Attached to this Form: _____

yes

Waste Composition (Identify all components i.e. clay rock debris, plastic etc. total should=100)

TPHC

= 0.36%

Soil

= 99.63%

= %

PCB

= 0.014%

= %

= %

Certification

I hereby certify that the above information is a true and accurate description to the best of my knowledge of the material we intend to ship to Clean Earth of New Castle, Inc.

Signed: _____

Joseph M. Fallon

Date: _____

4/16/98

Print Name: _____

Joseph M. Fallon

Title: _____

Environmental Scientist



of New Castle, Inc.

94 Pyles Lane • P.O. Box 1049 • New Castle, DE 19720-1049

Telephone: (302) 427-6633 • Fax: (302) 427-6634

APPROVAL NUMBER: _____

NON-HAZARDOUS WASTE CERTIFICATION SHEET

PCB Certification

I, the undersigned, under penalty of law, do hereby certify that the material to be submitted for thermal treatment at Clean Earth of New Castle, Inc.'s facility does not contain polychlorinated biphenols (PCBs) at concentration greater than 40 ppm and was not derived from a source containing PCB's at a concentration greater than 50 ppm as defined in 40 CFR 761.

Herbicide/Pesticide Certification

I, the undersigned, under penalty of law, do hereby certify that the material to be submitted for thermal treatment at Clean Earth of New Castle, Inc.'s facility does not contain Herbicides or Pesticides at concentrations that would render it a hazardous waste as defined in 40 CFR 261.

Non-Hazardous Waste Certification

I, the undersigned under penalty of law, do hereby certify that the material to be submitted for thermal treatment at Clean Earth of New Castle, Inc.'s facility is not a listed hazardous waste, nor does it contain a listed hazardous waste, nor does it exhibit any of the characteristics of a hazardous waste as defined in 40 CFR 261.

The undersigned also acknowledges they have used due diligence in determining the Non-Hazardous status of the said material, as defined in 40 CFR. Should at any time after delivery, the material accepted by Clean Earth of New Castle, Inc. be found nonconforming to the above, it becomes the responsibility of the Generator/Agent to remove the waste from Clean Earth of New Castle, Inc.'s property within five (5) days of notification (notification is to be verbal followed by written notification, overnight receipted). It is the Generator/Agent's responsibility to abide by all Federal, State, and Local regulations associated with the removal of their waste. If the waste is not removed within the specified time period, said disposal shall be arranged by a Clean Earth of New Castle, Inc. representative and billed to the Generator/Agent at cost plus basis. Furthermore the Generator/Agent will be responsible for any and all costs for decontamination required at Clean Earth of New Castle, Inc.'s facility, that is related to the Generator/Agent's material and all liability for such nonconforming waste shall revert to the Generator/Agent.

I CERTIFY THAT I AM AUTHORIZED TO EXECUTE THIS ON BEHALF OF:

US Army Fort Monmouth

Joseph M. Fallon

GENERATOR NAME

Environmental Scientist

PRINT NAME

Joseph M. Fallon

TITLE

4/16/98

AUTHORIZED SIGNATURE

DATE

MGP Certification

For sites that contain MGP waste, the undersigned further certifies that site remediation was conducted and the waste was characterized with the oversight of the appropriate regulatory agency and that Clean Earth of New Castle is an acceptable form of treatment for the MGP coal distillate contaminated soil. For sites that are NPL sites, this section must be completed by the appropriate regulatory agent.

PRINT NAME

COMPANY(AGENCY)

TITLE

AUTHORIZED SIGNATURE

DATE

REGULATOR

☒ (check one)
GENERATOR

DESIGNATED AGENT

An Equal Opportunity Employer

OF

CLEAN EARTH OF NEW CASTLE, INC.

94 Pyles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date **6/5/98**
Time **8:03 AM**
Ticket# **39981**

Approval # **980139**

Type of Material	Gross	Tare	Net Tons	*Drums
ON PCB MINERAL OIL	77,560	26,720	25.42	

1 ID# **518** **JANET W. ELLIOTT** Signature *Janet W. Elliott*

Bill of Lading#
Invoice# **016**
Manifest#

Trans. ID# **19**
Transporter **TAT TRUCKING, INC.**
Trans. Addr. **3482 WRANGLE HILL ROAD**
BEAR, DE 19701

DE-SW Permit# **077**

Driver **HOWLAND -** Truck # **403**

Customer **ECO-TRON NEW JERSEY, INC.**
Generator **U.S. ARMY, FORT MONMOUTH**

Generator Site **CHARLES WOOD AREA**
FORT MONMOUTH, NJ 08057

Contact 1 **TAHER GINWALA** **609-893-7873**
Contact 2

NOTES 1:

NOTES 2:

THANK YOU